1960

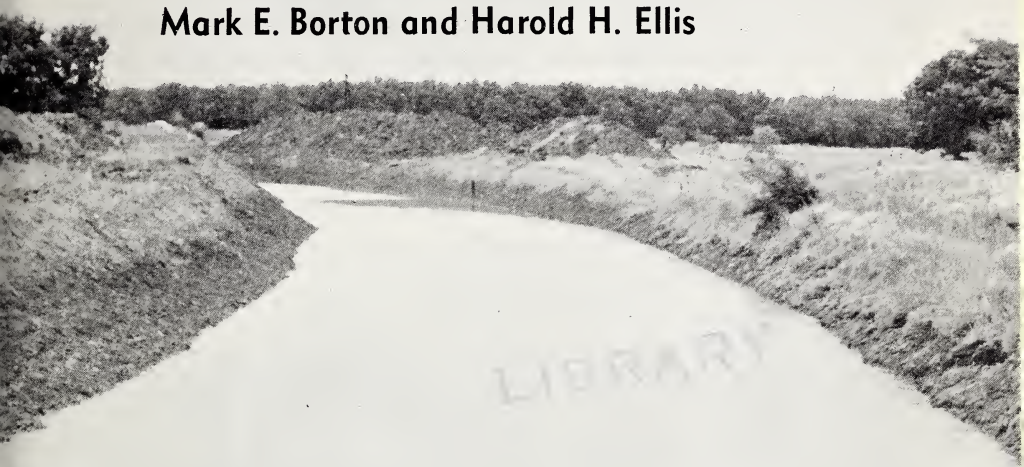
Some legal aspects of water use in Louisiana

Mark E. Borton

SOME LEGAL ASPECTS OF WATER USE

in Louisiana

Mark E. Borton and Harold H. Ellis



in No. 537 June 1960
uisiana State University and Agricultural Experiment Station
ultural and Mechanical College Charles W. Upp, Director

In Cooperation With
Farm Economics Research Division, Agricultural Research Service
United States Department of Agriculture

Foreword

Louisiana is blessed with an abundant supply of water for navigation, irrigation, and industrial and domestic use, as well as for fish and wildlife. The economic potential of this important resource has not yet been fully realized, nor has the destruction resulting from uncontrolled water been completely halted.

Louisiana's rice industry has long depended upon an abundant water supply for irrigation, but in recent years other segments of agriculture have also turned to supplemental irrigation and the increased use of water for other production purposes. These trends toward greater utilization of this resource are likely to continue, and perhaps at an accelerated pace.

The legal structure governing the rights of persons to appropriate, use, and dispose of water is very complex, and many problems will arise as water resources achieve greater economic importance. Constructive legislation may be needed to conserve this vital resource and encourage its most effective use. But sound regulation can best come from an informed public. It is for the purpose of promoting a better understanding of Louisiana water laws, particularly as they apply to agriculture, that the Louisiana Agricultural Experiment Station requested the Farm Economics Research Division, Agricultural Research Service, United States Department of Agriculture, to undertake a study of the legal aspects of water use in the state. It is believed that this carefully prepared report will contribute materially toward this objective.

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Acknowledgement

Figures and photographs were provided through the courtesy o the Louisiana Department of Public Works and the Louisiana Offi of the Soil Conservation Service, United States Department of Agricu ture.

Some Legal Aspects Of Water Use in Louisiana

Mark E. Borton and Harold H. Ellis*

Introduction

Water is one of Louisiana's most important natural resources and serves many vital needs. According to a recent report, Louisiana has an average rainfall of about 56 inches per year, nearly twice the national average.[1] But seasonal and yearly variations in this rainfall and its variations throughout the state cause problems of both water use and water damage. This is true also of water entering Louisiana from other states, through the Mississippi and other rivers and streams.

Furthermore, several types of water use have been expanding. It was reported that:

> Municipal use of water increased from 150 million gallons daily in 1950 to 242 million gallons daily in 1954.
>
> Industrial use jumped from 1,940 million gallons a day in 1950 to 3,750 million gallons a day in 1955.
>
> Rural use of water has almost doubled since 1950—from 47 to 85 million gallons a day.
>
> Irrigation water also showed an increase, with over one million acreage feet of water used in 1955—about 2,000 million gallons a day for a 160-day pumping season.
>
> . . . . . .
>
> The rivers, bayous, canals, and lakes are being used more and more for navigation, recreation, commercial fishing, sports, and disposal of waste. These are nonwithdrawal uses that are difficult to measure, but of great economic importance.
>
> . . . . . .
>
> Based on records of the past few years, it is reasonable to expect

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The authors wish to acknowledge the helpful criticisms and suggestions of a number of state, federal, and local officials and other persons concerned with water use in Louisiana, especially (1) Mr. Fred Ellis, who reviewed the manuscript under the guidance of Dean Milton Harrison and Professor Joseph Dainow, The Law School, Louisiana State University and Agricultural and Mechanical College, (2) Dr. F. L. Corty, Department of Agricultural Economics, Louisiana State University, who handled publication details and related editorial work, and (3) Mr. Calvin T. Watts, Assistant Director, and other staff members of the Louisiana Department of Public Works, who provided information regarding a number of projects with which that department is concerned.

[1] *Water, A Special Report to the Louisiana Legislature,* by the Louisiana Department of Public Works, Baton Rouge, 1956.

the use of water to be doubled in the next 10 or 15 years. This increase will be accompanied by conflicts of interests and competition among users.

. . . . . .

The 1954 Census of Agriculture reported 6,897 irrigated farms in Louisiana with 707,818 irrigated acres of cropland harvested (including 665,607 acres of rice).[2] Most of the irrigation was in southwestern Louisiana. This irrigated land amounted to 136,153 acres more than the 571,665 acres reported for 1949.[3] Streams and lakes supplied somewhat less of the 1949 irrigated acreage than did pumped wells, with miscellaneous sources providing the rest.

A capital investment of $21,503,040 in irrigation works was reported in the 1950 Census. These works included dams, reservoirs, wells, and 3,477 miles of canals and ditches.[4] The irrigation enterprises were classified as follows:

Type of Enterprise[5]	Number	Acreage Irrigated[6]
Single-farm	3,584	342,590
Commercial	270	243,588
Unincorporated cooperative	47	15,735
Incorporated cooperative	4	1,574

Irrigation of rice has long been a common practice in Louisiana. More recently, irrigation of other crops and pastures has been increasing, particularly in the northern half of the state. According to a recent survey, the number of farms equipped for irrigation (other than irrigation of rice) in 27 North Louisiana parishes increased from 12 in 1949 to about 466 in 1955, while the acreage equipped for irrigation increased from 566 to 39,610. Flooding is the standard method of irrigating rice, but methods of irrigating other crops and pastures included both flooding (31,454 acres) and sprinkling (20,681 acres). Most of this

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[2] Not counting irrigated pasture or irrigated cropland not harvested and not pastured.

[3] See Table 21, 1954, Census of Agriculture, Vol. II, General Report; Parish Tables 1a and 9a, Vol. I, Part 24, Counties and State Economic Areas, Louisiana (1954 Census); Parish Tables 1a and 5a, Vol. I, Part 24, Counties and State Economic Areas, Louisiana (1950 Census).

In addition to the 571,665 acres of cropland harvested in 1949, 4,434 acres of irrigated pasture and 676 acres of irrigated cropland not harvested and not pastured were reported. Similar data were not obtained in the 1954 Census.

[4] 1950 U.S. Census of Agriculture, Vol. III, Irrigation of Agricultural Lands, Part 8, Louisiana, State Table 2.

[5] An enterprise was classed as "commercial" if less than 50 percent of the acreage irrigated was in the farms of the water users that controlled and operated it. It was classed as cooperative (or mutual) if it was controlled and operated by two or more water users primarily to supply water to their own farms. These classifications do not necessarily correspond with legal classifications of enterprises in Louisiana. See *Irrigation Companies*, infra.

1950 U.S. Census of Agriculture, Vol. III, Irrigation of Agricultural Lands, Definitions and Part 8, Louisiana, State Table 2. (Comparable data were not obtained in the 1954 Census.)

[6] Acreage reported by more than one type of enterprise was included for each.

irrigated acreage was from streams, lakes, and ponds, but the proportion using wells was increasing.[7]

Irrigation is a seasonal use of water. Much of it takes place when natural streamflows are lowest and when several competing uses, for instance recreational and municipal uses, may be relatively intense. At such times, withdrawals for one or more types of use also may aggravate pollution problems.

With expanding uses of water for irrigation and other purposes, an increasing number of problems and potential conflicts concerning water use, disposal, and control may be expected—both among farmers and among the different segments of the state's economy. Moreover, an increasing need for development of natural water resources may be expected, such as the construction of dams to regulate and even out streamflows and provide storage of water for use in seasons of short natural supply. The Legislature in 1958, in an act declaring a state policy regarding surface waters and establishing a water resources study commission, noted that "continued waste, and misuse or lack of beneficial use of surface waters may create critical problems . . ."[8]

With this expanding activity, it is important for farmers and others to have a general understanding of their legal rights and responsibilities in utilizing and developing the various water resources in the state, including natural rivers, streams, lakes or bayous, artificial watercourses, diffused surface waters, and ground waters. Rights to use water may vary with the nature and type of the source. They may also vary with such factors as type and method of use and location of the land on which the water is used in relation to source of water.

Laws relating to water resources in Louisiana are embodied in: (1) the State's Constitution, Civil Code, Revised Statutes, and reported Supreme and Appellate Court decisions; (2) certain special or local laws enacted by the State Legislature that have not been incorporated in the Revised Statutes;[9] (3) Federal statutes, constitutional provisions, and court decisions; (4) certain rules and regulations promulgated by state-federal agencies; (5) local laws, such as parish or municipal ordinances; (6) certain interstate compacts or agreements; and (7) local court decisions not appealed from.

The discussion that follows deals with several features of the applicable water laws of Louisiana but is not exhaustive in these respects.

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[7] Wiegmann, Fred H., and Koch, Kenneth A., *Trends in Irrigation in Louisiana*, Louisiana State University and A and M College, Agr. Expt. Sta., D.A.E. Circular No. 187, March, 1956. See also Wiegmann, Fred H., *General Crop Irrigation in 1955*, Louisiana State University and A and M College, Agr. Expt. Sta. Mimeo. Circular No. 179, April, 1955, p. 28.

[8] Louisiana Acts 1958, No. 363. See *1958 Declaration of State Policy Regarding Surface Waters.*

[9] It may be noted that L.S.A.—Const. of 1921, Art. 4, sec. 6, requires notice of intention to secure passage of a "local or special law" to be published, without cost to the state, "in the locality where the matter or things to be affected may be situated . . ."

Primary attention in this discussion will be given to state legislation incorporated in the Louisiana Civil Code and Revised Statutes, and the reported Supreme and Appellate Court decisions. The laws discussed herein relate to legal rights of individuals, organizations, and agencies concerning the ownership, use, control, or regulation of the various water resources in the state. Except as indicated otherwise, the discussion deals with the general rules of law that have been adhered to by the state's Supreme Court, in the absence of contractual agreements, prescriptive rights, controlling statutes, or other complicating factors.

Louisiana law has its foundations in the French, Spanish, and Roman civil law, in contrast to other states whose foundations are in the common law of England (although court decisions in Louisiana have been influenced in various cases by common law principles followed in other states). While the similarities between the two systems are perhaps as striking as the differences, one major difference must be noted. In general, in the common law, the law regulating relationships between individuals is formed largely in the courts through decisions of the judges in particular cases. Any legislation changing this "judge-made" law is viewed as a modification of this basic case law, while other legislation may merely codify it. But in the civil law, the basic law concerning relationships between individuals is found mainly in legslation rather than in case law. Case law has developed mainly to explain and illuminate this legislation. The result reached may be the same under either system, but the methods differ. One striking similarity is that the so-called riparian doctrine has been applied in various ways to the use of water in natural watercourses in Louisiana and several other states, particularly in the eastern United States. This has resulted primarily from legislative provisions in Louisiana, whereas in other states it has been primarily a development of the common law, although apparently based on some ideas borrowed from the French Civil Code.

The codification of the laws regulating relationships between individuals is the Louisiana Civil Code of 1870, as amended, while certain provisions added since 1870 appear in Title 9 of the Louisiana Revised Statutes. The Louisiana Revised Statutes (except for Title 9) contain legislation affecting public law; i.e., the law that governs relationships between individuals and the State or public. (The Louisiana Civil Code of 1870, Constitution of 1921 and earlier constitutions, and Revised Statutes of 1950, with amendments, are all embodied in Louisiana Statutes Annotated, which hereafter in this bulletin are referred to as L.S.A.)[10]

The primary objective of this discussion is an exploration of some of the legal aspects of water use in Louisiana, with primary emphasis on agricultural uses. Water use problems are increasing. In the past

[10] For a more complete discussion of the nature of Louisiana's Civil Law and its relationship to the common law, see Dainow, Joseph, "Introductory Commentary to the Louisiana Civil Code," L.S.A.—Civil Code, Vol. 1, page 1.

however, most disputes in Louisiana arising from water problems have centered around the rights and duties associated with the disposal of water through drainage; very few disputes have centered around the rights and duties associated with the use of water. Consequently, there has been little authority outside the Civil Code and some provisions of the Revised Statutes for answers to many of the questions that might be raised concerning water use. Usually the provisions of the Civil Code are deliberately couched in very general terms to cover the vast number of particular fact situations that might be presented. The scarcity of reported court decisions regarding water use makes it difficult to give precise answers to these questions. In several instances, only possible or probable answers are set forth.[11]

In any event, as the laws may change and their application may depend on the particular circumstances of each case, the discussion that follows should not be regarded as a substitute for competent legal advice on specific problems.

Natural Watercourses

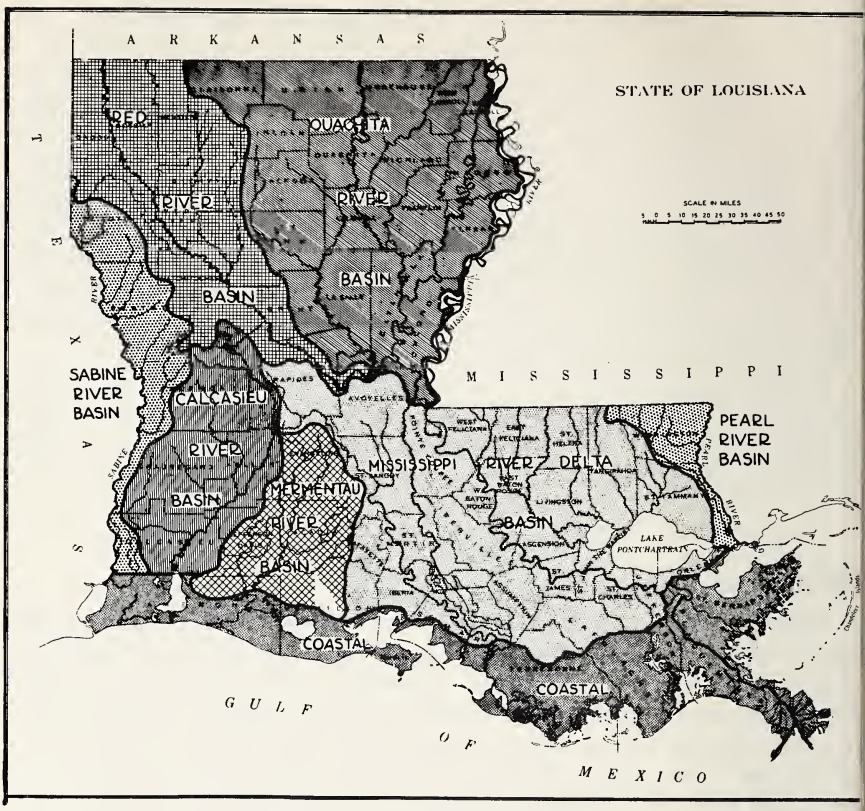
Definitions

Various rights concerning the waters, beds, and banks of watercourses may depend on the definitions of and the distinctions between certain types of watercourses. In Louisiana, there are as yet no clear definitions or distinctions of this kind for the purpose of determining rights *to use the waters* of any watercourse, but certain definitions or distinctions have been made in cases in which other rights closely associated with watercourses were involved, such as drainage rights and ownership of beds, banks, and lands near or adjoining certain waters. Bear in mind, however, that the definitions and distinctions that are applicable in determining one set of rights (e.g., rights regarding beds and banks) may or may not be applicable in determining another set of rights (e.g., rights to use waters).

The Supreme Court of the state has never defined or distinguished between different bodies of water in its few cases that have dealt with the rights of persons to utilize water from them.[12] The principal Code

[11] Other discussions of various aspects of Louisiana water laws include: Walther, E. P., Jr., "Acquisition of the Right to Use Water." 29 Tulane Law Rev. 554 (1955); Jones, Jerry G., "Water Rights in Louisiana," 16 La. Law Rev. 500 (1956); and *Water Problems in the Southeastern States*, Research Report No. 5, Louisiana Legislative Council, Baton Rouge, April 7, 1955; revised and published as Research Study No. 11, December, 1957.

[12] The Second Circuit Court of Appeal decided a case in 1925 in which rights to the use of a bayou were involved. The court indicated that from the evidence it was not clear whether the bayou was "a running stream." It said, "we get the impression that it is not." The bayou was described as being about 2,000 feet long, 100 feet wide, and nonnavigable. But the court did not otherwise discuss how the body of water should be classified, nor did it indicate what difference it would have made if the bayou had been a running stream. Jackson v. Walton, 2 La. App. 53 (1925). The case is discussed more fully later, under *Natural Lakes and Bayous.*



Principal river basins of Louisiana.

article dealing with such rights refers only to "running water."[13] It i difficult to predict what bodies of water the court might consider to b subject to its terms. From the cases discussed below, it appears tha the court may require a flow more continuous than that which woul depend solely on rainwater, that the flow generally be only in one di rection, and that there be at least poorly defined banks. But none o these cases directly involved rights to use waters.

In 1904, the court said that a body of water which lay in th middle of a swamp, forming a part of a so-called shallow lake conveyin water sometimes one way, sometimes another, depending for its exis ence on overflow from streams or rainwater, was a mere slough rathe than a stream. This case involved the question of whether title to ce

[13] L.S.A.—Civil Code, Art. 661: "He whose estate borders on running wat may use it as it runs, for the purpose of watering his estate, or for other purpose

"He through whose estate water runs, whether it originates there or pass from lands above, may make use of it, while it runs over his lands; but he canno stop or give it another direction, and is bound to return it to its original channe where it leaves his estate."

The term "running water" is used also in Article 450, included in Appendix, infr

tain lands was to be decided under the law applicable to rivers and streams, or under the law applicable to swamp and overflowed lands.[14]

In a 1957 case, the court was faced with the problem of determining whether a body of water called "the Deer Park Bend channel" was a "lake or pond" or a "river or stream" within the meaning of L.S.A.—Civil Code, Article 509.[15] This article deals with the ownership of "accretions" to soil formed along the shore of a "river or other stream."[16] The court stated broadly that this article applies to "all streams whose waters have the power to form accretions . . ." It noted that "Generally, a lake could not have so done because in it there is not sufficient moving water to form silt to the extent of forming additions to its banks."[17]

The court further concluded that:

> In the present case at the present time there is not a constant or continuous flow at low water around the bendway every day in every year, but definitely the bendway is not a lake. When it does flow it is not drainage and the bendway gets its water from the main body of the Mississippi River. A stream is not required to flow every minute of the time. In this case the bendway is characterized by definite banks on each side, a definite bed, a natural current always downstream with the main body of the Mississippi River being the source of water supply. The current is capable of carrying alluvion and of depositing it along the banks. These characteristics fulfill every possible requirement of a stream and prevent the Deer Park Bend channel from being classified as a lake or pond up to this time.[18]

With respect to the continuity of flow, the court noted that:

> Apparently the language of the article acknowledges that there is a distinction between a river and a stream. Smaller streams may

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[14] Hall v. Board of Com'rs. of Bossier Levee Dist., 111 La. 913, 35 So. 976 (1904). See also State v. Aucoin, 206 La. 786, 20 So. 2d. 136 (1944) regarding the question of shallow lakes whose beds were granted to the state as "overflowed land" in swamp-land grants by Congress.

See *"Diffused Surface Water,"* infra, for a discussion of such water.

[15] Esso Standard Oil Co. v. Jones, 233 La. 915, 98 So. 2d. 236 (1957).

[16] L.S.A.—Civil Code, Art. 509: "The accretions, which are formed successively and imperceptibly to any soil situated on the shore of a *river or other stream,* are called alluvion.

"The alluvion belongs to the owner of the soil situated on the edge of the water, *whether it be a river or stream,* and whether the same be navigable or not, who is bound to leave public that portion of the bank which is required by law for the public use." (Emphasis added.)

[17] Quoting from Amerada Petroleum Corp. v. The State Mineral Board, 203 La. 473, 14 So. 2d. 61, 69 (1943), which is discussed later. It would seem, however, that accretions might form along the bank of a lake near the outlet of rivers or streams that may discharge into the lake.

[18] The ends of the horseshoe bendway had been cut across by the Corps of Engineers and the main channel of the river straightened.

This case involved the question of rights to oil royalties on oil taken from wells located on accretions of soil formed on the edge of the bendway.

The quoted statements are from the original trial court's opinion which the Supreme Court adopted as its own.

> go completely dry in the summer and resume their flow with the coming of winter rains. They must still retain their status as streams . . .

In 1943, the court similarly was faced with the problem of determining whether a body of water designated as an "Arm of Grand Lake" was in fact an arm of a lake, or whether it was a "river or other stream" falling within the scope of the above-mentioned Article 509. The court quoted extensively, with approval, from the trial judge's decision, which read in part as follows:

> According to these definitions[19] we must, therefore, note that a lake does not imply a body of water in which a current flows, but it indicates a body of water, more or less, stagnant, in which the water is supplied from drainage. In rainy seasons drainage would increase, and hence, the level of the water would probably rise and a current would form. A river is distinguished from a lake in that it flows, more or less, in a permanent bed or channel between defined banks or walls with a current, whereas streams are bodies of flowing water including rivers. A stream, therefore, includes any body of flowing water.
>
> We have seen that the arm of Grand Lake is a body of flowing water and in my opinion constitutes, therefore, a stream within the meaning of Article 509 of our Civil Code.
>
> It cannot be classified as a river, because it does not possess well defined banks or walls as are required of rivers, and it cannot be called a lake because its waters are not still or dead and the waters are not supplied from drainage as is required of lakes.[20]

The Supreme Court did not quarrel with these definitions set forth by the trial court. It noted that since the parties in the case had agreed that the water in question "flowed between banks," it might be a river.[21] But it concluded that, "Regardless of the characterization of the water as a river or merely as a flowing stream, the conclusion reached by the trial judge is correct." Article 509 applies to both.[22]

The court noted also that the arm of Grand Lake was 3,960 and 4,40(feet wide, respectively, at the two points measured, and said:

> This width is relatively insignificant as compared to the width o Grand Lake, and this width between banks negatives the idea tha

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[19] The trial judge had referred earlier to the definition of rivers, streams, an lakes as defined in *Black's Law Dictionary*. (Authors' footnote.)

[20] Amerada Petroleum Corp. v. State Mineral Board, 203 La. 473, 14 So. 2d. 6 68, 69 (1943).

[21] It also noted that the arm of Grand Lake "is unmistakably a part of Atchafalay River by which its waters are solely supplied." Amerada Petroleum Corp. v. Stat Mineral Board, 203 La. 473, 14 So. 2d 61, 70 (1943).

[22] Amerada Petroleum Corp. v. State Mineral Board, 203 La. 473, 14 So. 2d. 61, 7 (1943). Accord: Amerada Petroleum Corp. v. Case, 210 La. 630, 27 So. 2d. 431 (1946)

it is a lake instead of a widening branch or fork of the Atchafalaya River.[23]

It would appear, therefore, that the size of a body of water may be significant at least in distinguishing a lake from a mere widening of a stream or river for the purpose of deciding the applicability of Article 509 regarding accretions.

The court had earlier indicated in two cases that where rivers flowed through certain large bodies of water, these bodies of water were lakes and not merely widenings of the rivers.[24] The large size of the bodies of water in these two cases apparently was a factor in defining them as lakes rather than rivers or streams. They involved the question of whether the state had acquired title to lands adjoining a navigable lake that had become gradually covered by the lake waters. However, in the later of these two cases, the court indicated that a navigable lake would be treated the same as a navigable stream for this purpose,[25] overruling the former case in this regard. Under this view, the distinctions drawn between lakes and streams in these two cases apparently would not have been necessary.[26]

In the earlier of these two cases, the body of water involved was 18 miles long and from 4½ miles to 14 miles wide. The river entering the body of water was 600 feet or more in width and considerably deeper than the body of water. The river had a channel about 1,000 feet wide through this "lake," and in high water there was a slight current even near the shores of the lake. Under such a fact situation, the court conceded that in France, from which the Louisiana Code is largely taken, the lake would have been considered a mere widening of the river. But the court held that ". . . the better view . . . is to regard such a vast expanse of water as Calcasieu Lake as being in fact a lake, although a river empties into the sea through it."[27]

In the later case, the fact situation was nearly the same, except that the current in the lake was even stronger than in the earlier case. The court again treated the body of water, which was 3 to 9 miles wide and 10 miles long, as a lake rather than a stream.[28]

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[23] The court also noted that the river's waters flowed "through it . . . to again form a distinct river . . . before reaching the gulf." Amerada Petroleum Corp. v. State Mineral Board, 203 La. 473, 14 So. 2d. 61, 70, 71 (1943). In the 1957 Esso case, supra, the width of the bendway was not given, nor was its size emphasized. In both cases, the court determined that riparian landowners were entitled to the accretions rather than the state, which had held title to the bed of the river.

[24] State v. Erwin, 173 La. 507, 138 So. 84, 86 (1931); Miami Corp. v. State, 186 La. 784, 173 So. 315, 319 (1936).

[25] Miami Corporation v. State, 186 La. 784, 173 So. 315, 322-323 (1936).

[26] In the Amerada case, supra (at 14 So. 2d. 61, 67, 68, 72), the court noted that these two previous cases did not deal with accretions and indicated that the decision in the later (Miami) case was based on articles of the Code and related legal principles dealing with public ownership of beds, and hence were not decisive of the above-described question faced in the Amerada case.

[27] State v. Erwin, 173 La. 507, 138 So. 84, 86 (1931).

[28] Miami Corporation v. State, 186 La. 784, 173 So. 315, 319 (1936).

In view of the two foregoing cases defining certain large bodies o water, although having some current, as lakes, it might be questioned whether the courts would be willing to accept "any body of flowing water" (as stated in the above-mentioned 1943 case) as a definition o "a stream" in a case that would depend on such a definition.[29] It seems more likely that the court would be willing to distinguish between a river and a stream on the basis of the existence or nonexistence of well defined banks, but would distinguish between a stream and a lake or other grounds than merely whether or not the water flowed. Thus, a "stream" will probably be defined more liberally than a "river," bu not so liberally as to include "any body of flowing water."

The court has stated that a river or stream consists of its bed, its banks, and its water.[30] This would not preclude a distinction between a river and a stream; for, although both might be required to have banks, a river *must* possess well-defined banks, while the banks of a stream may be poorly defined.

Banks are defined in the Civil Code as follows:

> The banks of a river or stream are understood to be that which contains it in its ordinary state of high water; for the nature of the banks does not change, although for some cause they may be overflowed for a time.
>
> Nevertheless, on the borders of the Mississippi and other navigable streams, where there are levees, established according to law, the levees shall form the banks.[31]

The court has extended this definition somewhat, so that:

> The land lying between the edge of the water at its ordinary low stage and the line which the edge of the water reaches at its ordinary high stage—that is, the highest stage that it usually reaches at any season of the year—is called the bank of the stream. . . .[32]

As the levees of navigable rivers are made the banks of the river by the Code article set forth above, it follows from the above definition of banks that the levees are the ordinary high-water mark.[33] Because of the definition of banks, the bed of a stream is that land which is covered by water at its ordinary low stage.[34] But even though water i

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[29] See in this connection 32 Tulane Law Rev. 319, 323, note 20 (1958).

[30] Morgan v. Livingston, 6 Mart. (O.S.) 19,229 (La. 1819); State v. Richardson 140 La. 329, 338, 72 So. 984 (1916).

[31] L.S.A.—Civil Code Art. 457.

[32] Wemple v. Eastham, 150 La. 247, 90 So. 637, 638 (1922) Accord: Seibert v. Conservation Commission, 181 La. 237, 159 So. 375, 377 (1935); Pizanie v. Gauthreaux, 173 La. 737, 138 So. 650, 652 (1931); Ward v. Board of Levee Com'rs. of Orleans Levee Dist., 152 La. 158, 92 So. 769, 772 (1922).

[33] Seibert v. Conservation Commission, 181 La. 237, 159 So. 375, 377 (1935). This might not apply, however, in some cases where the levee may be located far beyond the ordinary high-water mark.

[34] Wemple v. Eastham, 150 La. 247, 90 So. 637 (1922); Pizanie v. Gauthreaux, 17 La. 737, 138 So. 650 (1932).

outside the bed of the stream, if it remains inside the levee or the ordinary high-water mark it would be within the watercourse.

Nature of Riparian Rights

Unless otherwise indicated, we are concerned in this section only with rights concerning *nonnavigable* watercourses, saving for later the discussion of *navigable* watercourses.

The court has fairly recently defined riparian rights to be:

> The rights of owners of lands on the banks of watercourses relating to the water, its use, ownership of soil under the stream, accretions, etc.[35]

From an examination of this definition, it can be seen that two separate but interrelated points are involved in determining rights to watercourses. The first of these concerns *who* has such rights, and the second concerns *what* are the rights. The "who" is given by the definition quoted above to be "owners of lands on the banks of watercourses," and the "what" is given to be "the water, its use, ownership of soil under the stream, etc."

As a matter of definition, then, riparian rights are limited to those who own[36] lands on the banks of watercourses. This is not to say that persons not owning such lands might not have rights "relating to the water, its use, ownership of soil under the stream, etc.," but only that such rights are not defined (at least by the court and, therefore, this bulletin) to be *riparian* rights. In the following three subsections, which deal with ownership of beds, ownership of water, and rights to use water, we shall be thinking, then, only in terms of riparian rights, i.e., the rights of those owning lands *on the banks* of the watercourses.[37]

Ownership of Beds

It is now well settled by the Louisiana courts that the beds of nonnavigable streams which were nonnavigable in 1812[38] generally are

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[35] Doiron v. O'Bryan, 218 La. 1069, 1081, 51 So. 2d. 628, 632 (1951). The dispute involved whether a conveyance of land that included "riparian rights" conveyed title to the bed of the adjoining water.

[36] In this bulletin, we shall, for convenience, use only the terms "own," "owner," and "ownership" when discussing the rights of persons in and to various waters. It is possible that persons holding or possessing land who are not the actual owners of the land may be entitled to claim, or be under a liability to observe, these rights. Thus a tenant or lessee may "stand in the shoes" of the owner, and be entitled to assert the same rights that the owner might have asserted. We therefore are using the above terms as "shorthand" symbols to describe all those persons, estates, and property interests that are capable of maintaining or defending an action based on the particular rights under discussion.

[37] Brief mention is made, however, of the possibility of ownership of beds by nonriparian landowners. The possibility of water use by nonriparian landowners is discussed later, under *Nonriparian Use.*

[38] The date of Louisiana's admission as a state into the United States. See 2 Stat. 701, effective April 30, 1812.

owned by the riparian owners to the thread of the stream.[39] The thread is defined as "the line midway between the banks at the ordinary stage of water, without regard to channel or the lowest and deepest part of the stream."[40] (Under this rule, of course, one owning land on both sides of a stream would own the entire bed.) The court has said that this arises by inference from Articles 513, 514, and 515[41] of the Civil Code.[42] Apparently it is possible to transfer ownership of the bed separately from a transfer of the adjoining lands.[43] This possibility of separate ownership of the bed and adjoining land may well raise a problem for determining rights in and to the use of waters between the owner of the bed and the owner of the adjoining land. This is discussed later, under *Rights to Use Water.*

The beds of nonnavigable streams which were navigable in 1812 however, may be owned by the state[44] (although the state could have transferred ownership of the bed of a formerly navigable stream to private individuals after it became nonnavigable).[45]

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[39] Begnaud v. Grubb and Hawkins, 209 La. 826, 25 So. 2d. 606 (1946); Amite Gravel and Sand Co. v. Roseland Gravel Co., 148 La. 704, 707, 87 So. 718, 719 (1921); Wemple v. Eastham, 150 La. 247, 253, 90 So. 637, 638 (1922); Nattin v. Glassell, 156 La. 423, 426, 100 So. 609 (1924); Bodcaw Lumber Co. of Louisiana v. Kendall, 161 La. 337, 338, 108 So. 664 (1926).

[40] State v. Burton, 106 La. 732, 31 So. 291, 292 (1902).

[41] L.S.A.—Civil Code, Art. 513: "Islands and sand bars which are formed in streams not navigable, belong to the riparian proprietors, and are divided among them according to the rules prescribed in the following articles."

L.S.A.—Civil Code, Art. 514: "If the island be formed in the middle of the stream, it belongs to the riparian proprietors, whose lands are situated on the sides opposite the island. If they wish to divide it, it must be divided by a line supposed to be drawn along the middle of the river. The riparian proprietors then severally take the portion of the island which is opposite their land, in proportion to the front they respectively have on the stream opposite the island."

L.S.A.—Civil Code, Art. 515: "If on the contrary, the island lies on one of the sides of the line thus supposed to be drawn, it belongs to the riparian proprietors on the side on which the island is, and must be divided among them in proportion to the front they respectively have on the stream opposite the island."

[42] Begnaud v. Grubb and Hawkins, 209 La. 826, 25 So. 2d. 606, 609, 610 (1946).

[43] Nattin v. Glassell, 156 La. 423, 426, 100 So. 609 (1924). In this case, the ownership of the bed of the nonnavigable stream was not actually in dispute, and the court did not decide where the title lay. It did, however, find that the words in a deed indicated that ownership of certain land was to be determined by measuring from the *banks* of the stream rather than the thread, saying, that in a sale of riparian land, ". . . the ownership extends to the thread, *unless it clearly appears otherwise that a different purpose was intended.*" (Emphasis added.)

[44] Wemple v. Eastham, 150 La. 247, 90 So. 637 (1922); Smith v. Dixie Oil Co., 156 La. 691, 702, 101 So. 24 (1924). Also see L.S.A.—R.S. 9:1101 as amended, Acts 1954, No. 443 whereby the Legislature declared the state to be the owner of all river and stream beds which were not privately owned on August 12, 1910. This is discussed under *Navigable Watercourses: Ownership of Beds,* infra.

[45] Bd. of Com'rs. of Caddo Levee Dist. of Louisiana v. Glassell, 120 La. 400, 45 So. 370 (1907). See La. Op. Atty. Gen. 1938-40, p. 705, for an opinion that after a navigable stream becomes nonnavigable the state owns the bed as a private, not

Ownership of Water

It appears that the waters flowing in rivers and streams, whether navigable or nonnavigable, are incapable of being privately owned.

L.S.A.—Civil Code, Article 450 cites running water as an example of a "common thing," the ownership of which belongs to nobody in particular,[46] and Article 482 states that common things are not susceptible of ownership.

In 1910 the Legislature declared the waters of "bayous, lagoons, lakes, and bays . . . not under the direct ownership of any person" to be the property of the state,[47] and in 1954 amended this declaration to include the waters of "rivers" and "streams,"[48] apparently not being satisfied that the former terms were sufficiently broad to cover rivers and streams. This declaration, as amended, reads as follows:[49]

> The waters of and in all bayous, rivers, streams, lagoons, lakes, and bays, and the beds thereof, not under the direct ownership of any person on August 12, 1910, are declared to be the property of the state. . . .
>
> This Section is not intended to interfere with the acquisition in good faith of any waters or the beds thereof transferred by the state or its agencies prior to August 12, 1910.

It will be noticed that the statute exempts from state ownership any waters which were privately owned on August 12, 1910. This exception would not seem to be applicable to the waters of rivers and streams, for, by the terms of L.S.A.—Civil Code, Article 450 (supra)—which has remained basically the same since the admission of Louisiana into the United States—running water is not susceptible of private ownership. The implication of the exception that such water might have been privately owned results from the inclusion of running waters with other waters which *are* susceptible of private ownership.[50] The excepting clause is meaningful when read in connection with the entire sentence.

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[45] (*Continued*)
public, property of the state, and hence may "prevent the public from using the stream for any purpose."

It also may be noted that a recent Supreme Court decision indicates that if the state had transferred title to navigable river beds prior to a 1921 constitutional provision (see below) to individuals, the individuals retain good title to the beds. California Co. v. Price, 225 La. 706, 74 So. 2d. 1 (1954).

L.S.A.—Const. Art. 4, sec. 2 (1921) contains a provision prohibiting the alienation of the beds of navigable streams by the state. Prior constitutions had no such provisions. See *Navigable Watercourses: Ownership of Beds*, infra.

[46] L.S.A.—Civil Code, Art. 450: "Things which are common, are those the ownership of which belongs to nobody in particular, and which all men may freely use, conformably with the use for which nature has intended them; such as air, *running water*, the sea and its shores." (Emphasis added.)

[47] La. Acts 1910, No. 258.

[48] La. Acts 1954, No. 443.

[49] L.S.A.—R.S. 9:1101. The entire section is included in Appendix, infra.

[50] See *Natural Lakes and Bayous*, infra.

Right to Use Water

Although the state apparently owns the water flowing in rivers and streams within its borders, the riparian owners have certain rights in and to the use of these waters. Article 661 of the Civil Code sets forth the riparian doctrine in Louisiana. It reads as follows:

> He whose estate borders on running water may use it as it runs for the purpose of watering his estate, or for other purposes.
>
> He through whose estate water runs, whether it originates there or passes from lands above, may make use of it, while it runs over his lands; but he cannot stop or give it another direction, and is bound to return it to its original channel, where it leaves his estate.

(A similar provision was included in the Civil Code of 1808, which evidently was borrowed from a provision in the Code Napoleon, 1804.[51]

In 1917 the court indicated that this Article vested certain rights in riparian owners, saying:

> Rural estates have always been bought and sold here with reference to the streams that furnish their water supply, and to the law which declares that he whose estate borders on running water

[51] This provision has undergone a few modifications since its incorporation in the Civil Code of 1808, which was in force in the territory prior to the state's admission to the Union in 1812. In the 1808 Code, p. 128, Art. 8, it read as follows:

"He whose estate borders on running water, may use it as it runs, for the purpose of watering his estate."

"He through whose estate this water runs, may make use of it in the space which it runs over, but he is bound to return it to its ordinary channel when it leaves his estate."

This provision was identical with Art. 644 of the Code Napoleon, 1804, except that in the Code Napoleon the following words were added in the first paragraph "other than that which is declared to belong to the public domain by article 538 under the title *of the Classification of Property. . . .*" See *Navigable Watercourses Right to Use Water*, infra.

(It may be noted that the Louisiana Code of 1808, p. 128, Art. 5, provided that "He who has a spring upon his estate, may use it as he pleases, saving the right which the proprietor below may have acquired by title or by prescription." Art. provided that a prescriptive right might be acquired by a lower proprietor after 3 years uninterrupted enjoyment following completion of works to facilitate the fall of and course of water through his estate. Art. 7 provided that: "The proprietor of the spring cannot change its course when this spring supplies the water that is necessary to the inhabitants of a city or town. But if the inhabitants have not acquired the use of said spring by prescription or otherwise, the proprietor may claim compensation for this use." However, these provisions, which were based on the Code Napoleon, were omitted from the 1825 and later Louisiana codes. The redactor of the 1825 Code noted that: "We have thought it best to suppress these three articles by which it was permitted to the owner who has a spring on his estate, may dispose of its waters under certain modifications at his pleasure [sic]. We have thought it was for the public interest to establish, as we have done in the following article, that the owner shall be bound to keep the water in its ordinary course at the place where it leaves his estate, whether the spring be on his land, or whether the water comes from above his own." The article adopted was a modification of Art. 8 of the 1804 Code and a forerunner of Art. 661 of the Code of 1870. *Louisiana Legal Archives* (1937), Vol. 1, p. 71, and Vol. 3, pp. 1983-1984.)

Who has the right to use this water, and for what purposes?

> or through whose estate water runs, may use it as it runs (Civil Code, Art. 661), . . . and [this provision has] been read into the titles to all the lands bordering upon all the streams, and through which streams have run, in this territory, since and before the State was created, and [has] vested in the owners of such lands the rights to which [it refers].[52]

Riparian owners also may have certain rights to use the waters of nonnavigable streams by virtue of the fact that they generally own the beds. Article 505 of the Civil Code states that: "The ownership of the soil carries with it the ownership of all that is directly above or under it." At first glance, this would seem to indicate that the owner of the bed would own the water above it, but we have seen that running water is incapable of private ownership.[53] This Article cannot, then, give

[52] Palmer Co. v. Wilkinson, 141 La. 874, 75 So. 806, 810 (1917). The case involved an action by the owner of riparian land along a nonnavigable stream called Coushatta Bayou to enjoin the defendant from exercising alleged mineral rights to drill for oil or gas in the bed of the stream under a lease from the state. The riparian landowner claimed that he owned the bed in question or, in any event, was entitled to have the water "free and unpolluted." The court held that he had stated a cause of action. The court also indicated, however (at 75 So. 810), that ". . . the state, in the exercise of its police powers, and in the public interest, may, perhaps, maintain a certain control, or take certain action, the extent and circumstances of which we shall not here attempt to define . . ." citing two earlier cases involving drainage and improvements for navigation. See also cases cited under L.S.A.—Const. (1921), Art. 4, sec. 15, Notes of Decisions, No. 33, with respect to vested rights and the exercise of the state's police power.

[53] See *Ownership of Water*, supra.

absolute ownership of the water to the riparian owners. But it is possible that certain rights to the water may be given by it.[54]

We shall now proceed to consider the nature and extent of the rights of the owners of riparian land along a flowing stream or other natural watercourse, as between each other, to use the water in connection with this riparian land. (The questions of what constitutes riparian land and of using water on nonriparian land are considered later.) There appear to be very few clear answers here. We shall, however, examine certain uses that may be made of water, and certain limitations on its use, so as to provide some indication of the rights involved. In the following discussion, we shall examine certain water uses from the standpoint of general riparian rights, with a consideration of legislative changes and programs left for later.

Irrigation—L.S.A.—Civil Code, Article 661 states that a riparian owner may use running water "as it runs, for the purpose of watering his estate. . . ." This certainly provides for some irrigation by the riparian owner, but just how much is not clear.

It may be noted that Article 661 also states that one through whose estate water runs ". . . cannot stop or give it another direction, and is bound to return it to its original channel, where it leaves his estate,"[55] while a section of the Revised Statutes provides that: "No person diverting . . . the course of water from a natural drain shall fail to return the water to its natural course before it leaves his estate without any *undue retardation* of the flow of water outside his enclosure thereby injuring an adjacent estate."[56] (Emphasis added.) But it is not very

[54] A somewhat similar situation exists in the case of oil and gas beneath the surface of the earth. The court has held that these minerals, like running water, are insusceptible of private ownership, while beneath the surface of the earth and "in place." Continental Securities Corporation v. Wetherbee, 187 La. 773, 175 So. 571 (1937). Nevertheless, the owners of the overlying soil have the right to reduce them to possession and make them their personal property. Allies Oil Co. v. Ayers, 152 La. 19, 92 So. 720 (1922); Continental Securities Corp. v. Wetherbee, 187 La. 773, 175 So. 571 (1937). Under such reasoning, the riparian owners, who are for the most part the owners of the beds of nonnavigable streams, would have the right to reduce these waters to possession and make them personal property.

One major distinction which must be noted between the two situations, however (besides the obvious fact that running water lies above the surface and oil and gas beneath the surface) is that in the case of running water the state has declared itself to be the owner (see *Ownership of Beds*, supra), while it has made no such pronouncement concerning oil and gas. Nevertheless, since any rights granted under L.S.A.—Civil Code, Article 505 would have been granted for more than 100 years prior to the state's pronouncement of ownership, it seems possible that ownership of the bed may carry with it some rights in the water above it.

A possible difficulty which should be noted if this approach concerning ownership of beds and the right to use water is valid is the problem created if ownership of the bed may be in a different person than ownership of the banks. (See *Ownership of Beds*, supra.) L.S.A.—Civil Code, Art. 661 clearly gives certain rights to use the water to owners of the banks. If L.S.A. Civil Code, Art. 505 gives these same rights to the owners of the beds, a direct conflict between the two articles might result.

[55] See L.S.A.—Civil Code, Art. 661 in Appendix, infra.

[56] L.S.A.—R.S. 38:2:18.

Siphoning water for irrigation.

clear as to what constitutes such diversion. The significance of these provisions is discussed later, under *Diversion*.

In a 1926 case before the Louisiana 2d Circuit Court of Appeal, Article 661 was invoked by a lower owner in an attempt to compel the upper owner to remove two terraces which diverted water away from a natural drain into other drains located on the lower lands. It was contended that this caused flooding of the lower lands. Apparently the drain was not a continuous stream running from the upper estate onto the lower estate, and Article 661 was probably not applicable. But the court said that even if it conceded that it was applicable:

> It [Article 661] must be construed with the preceding article[57] and with the rule of construction which has been universally followed by the Supreme Court of this State in its application of the law to cases where one of the owners of contiguous estate has constructed works for improving and cultivating his land.
>
> The universal rule in this State has been to construe the law so as to reconcile it with the interests of agriculture; . . .[58]

[57] L.S.A.—Civil Code, Art. 660. See Appendix, infra. (Authors' footnote.)

[58] Chandler v. Scogin, 5 La. App. 484 (1926).

It may be noted that p. 128, Art. 9, of the Civil Code of 1808 contained a suggestion that in disputes concerning waters the judges should "conciliate the interest of agriculture with the respect due to property." However, this was deleted in the Code of 1825. The notes of the redactors indicate that this was done because the provision contained "rather advice than commands." *Project of the Civil Code of 1825, 1 Louisiana Legal Archives* 71 (1937).

In an earlier case (in 1885), where rights concerning waters in a constructed canal and cross ditch were involved, the Supreme Court indicated that while rights concerning the canal grew out of contractual agreements, these agreements did not contradict, and were supplemented by, Article 661 and certain other Code articles. The agreements related to the use of a canal that led from a lake or swamp across one sugar plantation to another adjoining plantation. This canal was crossed at right angles by a cross ditch on the former plantation. The court said that the owner of the former plantation could use the cross ditch for the proper cultivation and development of his estate, provided he did not thereby "unnecessarily divert" the flow in the canal or cause any "permanent injury" to the adjoining landowner which might seriously impair his contractual right to draw water through it, citing Article 661.[59]

These two cases appear to indicate that Article 661 is to be construed in cases involving rights to use water for irrigation so as to reconcile it with the interests of agriculture. This would be consistent with the way in which the preceding article (660), which deals with drainage rights, has been construed.[60] If this construction is placed on Article 661, it would seem that some form of a "reasonable use" rule would be developed within the framework of the riparian doctrine. The best interests of agriculture conceivably might be furthered by the application of some other doctrine, such as the Western "prior appropriation doctrine," but since Article 661 apparently is a statement of the riparian doctrine, it would seem more likely that it will continue to be applied.[61]

Probably, then, the right to use water for irrigation from nonnavigable streams is granted to the riparian owners; and the water is to be distributed among them (at least for irrigation purposes) such that each owner might use the amount of water that is "reasonable" under the particular circumstances.

There may, of course, be conflicts in the use of water between opposite owners on a stream, as well as between upper and lower owners. In view of the fact that each owner would be allowed to "water his estate," it would seem that some form of a "reasonable" distribution of water between the two would be called for. Each estate would have a right against and a duty to the other estate under Article 661, and it

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[59] His principal use of the water was for operating his sugarhouse. Shaffer v. State National Bank, 37 La. Ann. 242, 248 (1885). Other questions involved in this case are discussed under *Dams and Obstructions* and *Artificial Watercourses*, infra.

[60] Martin v. Jett, 12 La. 501, 32 Am. Dec. 120 (1838); Guesnard v. Bird's Exr's., 33 La. Ann. 796 (1881); Ludeling v. Stubbs, 34 La. Ann. 935 (1881); Petit Anse Coteau Drainage Dist. v. Iberia & V.R. Co., 124 La. 502, 50 So. 512 (1909); Broussard v. Cormier, 154 La. 880, 98 So. 403 (1923); Bolinger v. Murray, 18 La. App. 158, 137 So. 761 (1931); Becknell v. Weindhal, 7 La. Ann. 291, 292 (1852).

[61] This would be in accord with the usual French interpretation of Article 644 of the Code Napoleon (1804), according to Wiel, S. C., "Waters: American Law and French Authority," 33 Harvard Law. Rev. 133, 134, 148 (1919).

would seem that such a distribution would very likely arise in a situation of this kind.

Contractual Agreements—Particularly since the Louisiana law on the above and several other questions is not settled, consideration might be given to the possibility of entering into voluntary contractual arrangements.

L.S.A.—Civil Code, Article 752 provides that ". . . servitudes . . . which result from the situation of places, may be altered by the agreement of the parties, provided the public interest does not suffer thereby." This would seem to permit alternation of the riparian servitude under Article 661 of the Code as between upper and lower, or opposite, landowners.[62]

Apparently, a contract could be entered into by two or more riparian landowners located on the same stream to rotate or otherwise regulate the use of its waters, as between the contracting parties and between themselves and other riparian owners of the state or public. For example, by rotating their use during periods of short supply, the contracting parties would not reduce the streamflow as much as they might do otherwise.

The effectiveness of such contracts in reducing the danger of being enjoined by, or having to pay damages to, others who have not joined therein may be enhanced if the Louisiana courts adhere to a rule of reasonable use, as discussed above.[63]

Domestic and Other Uses—The right to use water from nonnavigable rivers and streams for domestic purposes has never been clearly determined by the court, but no doubt riparian owners have such a right.[64] Recall that L.S.A.—Civil Code, Article 661, discussed above, mentions use for watering a riparian owner's estate *or for other purposes.* So

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[62] It should be noted, however, that with respect to the servitude of drainage as between upper and lower lands under Article 660 of the Code (see Appendix, infra.), an appellate court has held that while such servitudes may be altered by agreement between the parties, by virtue of Article 752, of the Code, such a servitude affecting real estate cannot be altered in such a way as to hold subsequent owners of either property unless the agreement is in writing and is put on record or unless the subsequent proprietors can be charged with knowledge of the written agreement in some form or manner. Cornett v. Hebert, 31 So. 2d. 446, 450 (La. App., First Circuit, 1947).

Also see notes 148 and 150, infra., regarding the execution of access agreements and contracts with nonriparian owners.

[63] Their effectiveness would also be enhanced by adherence to "the balance of convenience" rule, discussed under *"Pollution,"* infra.

[64] See Palmer Co. v. Wilkinson, 141 La. 874, 75 So. 806, 810 (1917). The court apparently has not defined domestic uses other than by its reference in a case dealing with a navigable river to ". . . domestic purposes, *ad lavandum et potendum* . . ." The qualifying words apparently mean "to wash and to drink." New Orleans Waterworks Co. v. Louisiana Sugar Refining Co. and City of New Orleans, 35 La. Ann. 1111 (1883). The case is discussed later, under *"Navigable Watercourses: Right to Use Water."* See also the definition of domestic use in the Sabine River Compact, discussed later. What influence, if any, this definition might have on the Louisiana courts, except with respect to the Compact, is problematical.

long as the level of a stream is not appreciably diminished by the use for domestic purposes, the use would appear to be authorized by this article. Where, however, the stream would be diminished to the extent that lower owners might be deprived of the streamflow, it is difficult to determine how the water would be allocated—the upper riparian owners might be granted the entire flow of the stream, or there might be some equitable division of the flow among all the riparian owners. Probably the court would follow the French lead and apply some form of the "reasonable use" doctrine, such that all owners would share in the streamflow.[65]

The right to fish in nonnavigable streams apparently is vested solely in the riparian owners. In 1906, the court held that an injunction should not be issued compelling a riparian owner of lands on both sides and presumably the beds of certain nonnavigable bayous and lagoons to allow a fisherman who apparently was not a riparian owner to use these waters within the riparian owner's lands.[66]

Pollution—There have been a great many pollution cases in the last 50 years. It has not always been clear, however, under just what legal theory the courts have decided some of the cases.

The authors have been unable to discover any reported court decision in Louisiana where damages have been refused to an injured riparian owner on the grounds that the upper riparian had a right to cause the injurious pollution. There has been language in some cases indicating that a reasonable pollution might be made,[67] that pollution, if not negligent, might be allowed,[68] and there have been holdings that the right to recover damages had been lost by failing to take timely action,[69] or because damages were not proved.[70] But there have been no holdings denying recovery where, in fact, a timely claim has been made and actual damages shown. It seems likely that a riparian owner has a right to pollute a stream as against other riparian owners, only so long as they are not injured.[71]

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[65] See Weil, S. C., "Origin and Comparative Development of the Law of Watercourses in the Common Law and in the Civil Law," 6 Calif. Law Rev. 245, 263 (1918) and Weil, op. cit., note 61, 33 Harvard Law Review, pp. 149-151.

[66] Burns v. Crescent Gun and Rod Club, 116 La. 1038, 41 So. 249 (1906). The Louisiana Attorney General also has rendered an opinion to the same general effect. Report and Opinions of the Attorney General, 1938-1940, p. 705. See also Louisiana Navigation Co. v. Oyster Commission, 125 La. 740, 51 So. 706, 712 (1910); Delta Duck Club v. Barrios, 135 La. 357 and 364, 65 So. 489 and 491 (1914).

[67] Long v. Louisiana Creosoting Co., 137 La. 861, 69 So. 281 (1915); Orten v. Virginia-Carolina Chemical Co., 142 La. 790, 77 So. 632 (1918); Barrow v. Gaillardine, 122 La. 558, 47 So. 891 (1908).

[68] Phillips Petroleum Co. v. Hardee, 189 F. 2d. 205, 212 (1951).

[69] Young v. International Paper Co., 179 La. 803, 155 So. 231 (1934).

[70] Ricou v. International Paper Co., 117 F. Supp. 128 (1953); Rhodes v. International Paper Co., 174 La. 49, 139 So. 755 (1932).

[71] These observations are limited to actions between private riparian owners. The rights and liabilities of riparian owners to pollute streams as against public and state rights are discussed later, under *Pollution Control by Public.*

The same rule does not apply, however, regarding the right of a riparian owner to injunctive relief from upstream pollution. Even though damages are allowed the lower owner, he may not be able to prevent the polluter from continuing the pollution. Here the "balance of convenience" rule is applied, such that the relative good done by the pollution is weighed against the harm done, the cost of a cessation of the pollution is weighed against the advantage of a cessation, the good faith and exercise of care by the polluter is taken into account, the best interests of the community are considered, and, in general, the relative "conveniences" of the parties are balanced.[72] And, also, if actual or imminent damages are not shown, the injunction will be denied.[73]

Thus, a form of "reasonable use" is applied to test the availability of injunctive relief, even though a "strict liability" test is apparently applied for the determination of money damages.

We shall now consider in more detail the reported court decisions regarding a riparian landowner's right to damages as against a polluter.

In a 1915 case in which a lower riparian owner's land was injured by the negligent pollution of a stream by an upper riparian owner, the court talked in terms of "reasonable use." In the trial court, the lower riparian owner had been granted $200 damages for the injury to his land, and the upper owner appealed. The Supreme Court affirmed this decision, saying that although the right of a lower riparian owner to receive the waters from above in a pure state was subject to the right of upper riparian owners to make a reasonable use of the stream, the question of reasonableness of the pollution ". . . is for the judge or jury to determine from all the circumstances of a case, including the nature of the watercourse, its adaptability for particular purposes, the extent of injury caused to the lower riparian owner, etc."[74]

The court apparently was thinking in terms of the reasonable use doctrine found in several eastern common law states. (It cited no Civil Code article.) But the case has been neither cited nor followed in any pollution case considered later. It stands as the only case in which it appears that damages were determined by the relative rights of riparian owners to utilize the water, rather than by considering the duty of one owner not to cause injury to the property of another owner.

Just three years later, in 1918, the court, when faced with a case in which a chemical company had permitted sulphuric acid to escape into a drain emptying into a bayou running through a lower riparian owner's lands such that vegetation and livestock were killed, attacked the problem on the theory that such a use of property created a nuisance. This approach resulted in a form of reasonable use test again being applied, the court quoting from 29 Cyc. 1156:

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[72] Young v. International Paper Co., 179 La. 803, 155 So. 231 (1934); Ricou v. International Paper Co., 117 F. Supp. 128 (1953); Clark v. Gifford-Hill Co., Inc., 100 F. Supp. 879 (1951); Maddox v. International Paper Co., 47 F. Supp. 829 (1943).

[73] Young v. International Paper Co., and Ricou v. International Paper Co., supra.

[74] Long v. Louisiana Cresoting Co., 137 La. 861, 69 So. 281, 282 (1915).

> A fair test as to whether a business lawful in itself, or a particular use of property, constitutes a nuisance is the reasonableness or unreasonableness of conducting the business or making the use of the property complained of in the particular locality and in the manner and under the circumstances of the case, and where the use made of his property by the person complained of is not unreasonable, it will not, as a rule, be enjoined, nor can a person complaining thereof recover damages. But when it is established that a person is creating a nuisance, the mere fact that he is doing what is reasonable from his point of view constitutes no defense.[75]

The lower owner was allowed damages for the injury sustained. Although the court also applied a "reasonableness" test in this case, it should be noted that recovery was allowed because the upper riparian owner had used his property in such an unreasonable way as to create a nuisance. But so long as the same criteria used to determine reasonableness under a theory of nuisance are applied to the determination of the reasonableness of pollution under the theory of riparian rights, there would seem to be little difference in effect between the two approaches. Whether it is determined that a certain pollution is unreasonable and hence a nuisance violating the lower owner's right to enjoyment of his property, or it is determined that the pollution is unreasonable and hence a violation of his rights to the flow of the stream will make little difference if the same factors are taken into account in determining the reasonableness of the pollution.

The court had taken a third approach in an earlier case (1907) where an upper riparian owner had polluted a stream with salt water. The polluter attempted to avoid liability on the basis of L.S.A.—Civil Code, Article 660, which reads as follows:

> It is a servitude due by the estate situated below to receive the waters which run naturally from the estate situated above, provided the industry of man has not been used to create that servitude.
>
> The proprietor below is not at liberty to raise any dam, or to make any other work, to prevent this running of water.
>
> The proprietor above can do nothing whereby the natural servitude due by the estate below may be rendered more burdensome.

The polluter argued that this required the lower owner to receive the stream as it flowed from the polluter's estate, but the court held that this requirement, by the terms of the article, applied only to waters that ran "naturally" and were not rendered more burdensome by the upper riparian polluter. The taking of salt water from beneath the earth and placing it in the stream had rendered the servitude more burdensome through the industry of man, and the waters were not

[75] Orton v. Virginia-Carolina Chemical Co., 142 La. 790, 77 So. 632, (1918).

running naturally from the upper estate. Thus the polluter was liable for damages for the injury caused.[76]

This opinion was relied upon by a Federal District Court of Louisiana in deciding a 1943 case in which waste water was periodically released by the upper riparian owner (defendant) into a stream such that fish were killed and the water of the stream blackened. The lower owner (plaintiff) owned a fishing camp on the stream for commercial and sport fishing which was ruined by defendant's polluting of the stream. The defendant was not in any sense negligent, but, rather, had exercised good faith and great care to prevent harmful pollution. Plaintiff sought damages and to enjoin defendant from further polluting the stream.

The defendant argued, as one point of his case, that the injury was "damnum absque injuria"; i.e., that though the plantiff had been injured, the injury was not compensable at law under L.S.A.—Civil Code, Article 2315, under which the plaintiff was bringing his action. The pertinent sentence of this statute reads: "Every act whatever of man that causes damage to another, obliges him by whose fault it happened to repair it; . . ."[77] The court held, however, that Article 660 of the Code prevented the injury from being "damnum absque injuria," and the case clearly fell within the broad principle of Article 2315. The fact that the defendant had acted in good faith and with great care did not constitute a defense to an award of damages to the plaintiff.[78]

This third approach, using Article 660 as its basis, would indicate that any pollution rendering the lower estate's servitude to receive water more burdensome would give a cause of action to the lower estate. In practice, this approach could be reconciled with a reasonable use theory by construing Article 660 liberally to allow a reasonable amount of pollution, but there is no indication that this will be done. It seems that any pollution causing injury to a lower estate furnishes a cause of action.

The question of negligence or fault on the part of the polluter is difficult to unravel from the holdings and language of the decided cases. Under Article 2315 of the Code, any act causing damage to a person ". . . obliges him by whose fault it happened to repair it; . . ." Two defenses which might be set up by an upstream polluter to escape liability for injuries caused to downstream owners by his act of pollution are (1) that his act was done with care and good faith and hence is not caused by "fault" under the article, and (2) that he either has a right to use the stream as he has, or that the lower owner has no

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[76] McFarlain v. Jennings-Heywood Oil Syndicate, 118 La. 537, 43 So. 155 (1907). Also see Barrow v. Gaillardine, 122 La. 558, 47 So. 891 (1908) where the court held that the owner of an upper estate could not allow sugarhouse slops to drain into a bayou under authority of L.S.A.—Civil Code, Article 660.

[77] This is the general provision of the Civil Code regarding civil wrongdoings (called *torts*).

[78] Maddox v. International Paper Co., 47 F. Supp. 829, 831 (1943).

legal right to the pure flow of the stream, and hence the "act" is outside the scope of the article.

In the 1915 "reasonable use" case and the 1918 "nuisance" case, the court apparently accepted the second defense as valid, even though in both cases the particular facts prevented it from operating. The 1907 case and the 1951 Federal court case would deny the validity of the second defense, on the grounds that Article 660 of the Code sets up a legal duty compelling the upper riparian not to further burden the servitude due by the lower estate by polluting the stream. The Federal court case also denied the validity of the first defense, although no grounds were assigned for the denial.

The first defense, hinging on the issue of "fault," apparently is of no avail so long as there is a duty owed by the riparian owner to the lower owners not to pollute a stream to the extent that injury is caused the lower owners. It is here that the court's interpretation of Article 660 seems incompatible with its language concerning "reasonableness." It seems that Article 660 creates a duty not to make the servitude more burdensome, while in certain circumstances, a reasonableness test would of necessity allow the upper owner to make the servitude more burdensome.

It seems that Article 660 has won out, for the more recent pollution cases appear to have established that the downstream riparian owner can recover when he can prove damages and show that the actions of the polluter caused these damages.[79] The only possible exception to this rule that the writers have discovered is the case of *Phillips Petroleum Co. v. Hardee*, in which a United States Court of Appeals indicated that negligence on the part of the polluter must be shown.[80] But as the point, which the court was called upon to decide, concerned an interpretation of the Louisiana law applicable to the liability of joint wrongdoers, perhaps a great deal of weight should not be attached to this, particularly in view of the holdings by the Louisiana courts allowing damages even when great care has been shown.

Diversion—"Diversion" as used here means the changing of the course of a stream, either wholly or partially from its natural course into a different channel. L.S.A.—Civil Code, Article 661 provides that: "He through whose estate water runs . . . may make use of it while it runs over his lands; but he cannot stop or give it another direction, and is

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[79] Williams v. Pelican Natural Gas Co., 187 La. 462, 175 So. 28 (1937); Greer v. Pelican Natural Gas Co., 163 So. 431 (La. App. 1935); Bilbray v. Pelican Natural Gas Co., 163 So. 433 (La. App. 1935); Young v. International Paper Co., 179 La. 803, 155 So. 231 (1934); Rhodes v. International Paper Co., 174 La. 49, 139 So. 755 (1932); Ricou v. International Paper Co., 117 F. Supp. 128 (1953); Connell v. International Paper Co., 99 F. Supp. 699 (1951); Clark v. Gifford-Hill Co., 100 F. Supp. 879 (1951); Busby v. International Paper Co., 86 F. Supp. 603 (1949); Maddox v. International Paper Co., 47 F. Supp. 829 (1943); White v. Edgerly Petroleum Co., 4 La. App. 20 (1925).

[80] 189 F. 2d. 205, 212 (1951).

bound to return it to its original channel, where it leaves his estate.[81] This statement is somewhat ambiguous, for the prohibition against giving water another direction would seem to prohibit diversion while the mandate to return the water to its "original channel" seems to imply that it might be taken from its natural channel for a time. Perhaps, however, the implication is only that water might be *withdrawn* from the stream, rather than that the course of the stream might be changed; thus authorizing withdrawal and not diversion. Or perhaps what is meant is that the entire flow cannot be given another direction, or diverted, but that a partial diversion would be allowed so long as a certain flow is left in the original channel, and the diverted water is returned to the channel.

In any case, the Legislature has indicated that diversion under certain circumstances will be allowed by the following statute:

"No person diverting . . . the course of water from a natural drain shall fail to return the water to its natural course before it leaves his estate without any undue retardation of the flow of water outside his enclosure thereby injuring an adjacent estate." Penalty is provided for violation.[82]

It is not clear what the courts might hold in a situation in which a stream is diverted for purposes of water use rather than drainage. It would seem that if the diverter returns the stream to its original channel where it leaves his estate, without undue retardation, the diversion would be allowed, as probably the lower owner would not ordinarily be injured. At the other extreme, if the diverter changes the course of the entire stream so that it flows from his estate onto the lands of a person different from the one who would have received the waters in their natural course, it would seem that the owner deprived of the waters might complain of this deprivation. Whether he would have to show actual or impending damage to maintain a cause of action is difficult to determine, but it would seem from the Civil Code that he would be entitled to the flow as a servitude,[83] and should not be required to show damages.

Between the two extremes of diversion lie the situation in which the upper owner might divert a portion of the stream, allowing the rest to flow in its natural channel; and that in which he diverts the waters onto lands owned by the same person who would have received the stream in its natural channel, but not at the point at which they would enter naturally. Prediction of the legal results of such actions would be difficult to make with any assurance of accuracy. But there is

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[81] This article provides also that "He whose estate borders on running water may use it as it runs, for the purpose of watering his estate, or for other purposes." See Appendix, infra.

[82] L.S.A.—R.S. 38:218. This section provides for a fine of $25 to $100 and/or imprisonment for 10 to 30 days.

[83] See *Nature of Riparian Rights*: *Right to Use Water*, supra.

some indication from an 1885 court decision,[84] discussed above under *Irrigation,* that some kind of reasonable use rule may apply at least in the former type of case.

The above discussion has dealt with diversion of waters by an owner *through* whose lands the stream runs. In such a situation, there are no rights of an opposite owner to consider. When a riparian owner diverts water from a *bordering* stream, such that an opposite owner is affected, a different situation is presented. For even though all the water diverted is returned farther downstream, the opposite owner may be adversely affected. There is little on which to base an opinion as to the relative rights of the riparian owners in such a case. Article 661 of the Code would seem to indicate that a complete diversion of a stream by one owner would violate the servitude due the opposite owner created by the Article. Perhaps a partial diversion of the stream would be allowed, particularly if the "interests of agriculture" would be served by such diversion. A great deal would depend upon how strictly the court would interpret the servitude of Article 661. It seems probable that some form of reasonableness test would be applied in situations such as that indicated earlier under the discussion of *Irrigation.*[85]

Dams and Obstructions—There have been a number of decided cases in which the lower owner has obstructed a stream in such a way that the upper owners are damaged by the waters that are backed up or by the lack of proper drainage.

Article 660 of the Civil Code provides, among other things, that:

> The proprietor below is not at liberty to raise any dam, or to make any other work, to prevent this running of water.

The court has consistently regarded this provision as prohibiting any obstruction of a natural stream that damages the upper owner by hindering the natural drainage of his lands,[86] unless the upper owner has long acquiesced in the arrangement,[87] or the parties have agreed to such obstruction and alteration of the drainage,[88] or the parties had acquired their lands from a person who owned both their properties

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[84] Shaffer v. State National Bank, 37 La. Ann. 242, 248 (1885).

[85] See Planiol, Marcel, Treatise on the Civil Law, 12th Ed., Translation by the Louisiana State Law Institute (1959), Vol. 1, No. 2419, for a French interpretation of Art. 664, Code Napoleon 1804, from which Art. 661 of the Louisiana Civil Code was evidently borrowed.

[86] Hooper v. Wilkinson, 15 La. Ann. 497 (1860); Darby v. Miller, 6 La. Ann. 645 (1851); Herbert v. Hudson and Lamberth, 13 La. 54 (1839); Petit Anse Coteau drainage Dist. v. Iberia & V. R. Co., 124 La. 502, 50 So. 512 (1909); Vidrine v. Guillory, 3 La. App. 462 (App. 1925).

[87] Becknell v. Weindhal, 7 La. Ann. 291 (1852).

[88] Guillory v. Fontenot, 170 La. 345, 127 So. 746 (1930); Barrilleaux v. Delaune, 176 La. 377, 145 So. 776 (1933); Elam v. Cortinas, 219 La. 406, 53 So. 2d. 146 (1951). See also Robertson v. Lebermuth, 132 La. 318, 61 So. 388 (1913).

and had changed the natural drainage prior to the disposition of the parcels.[89]

In a very early case (in 1826) in which a lower riparian owner had constructed a milldam in such a way that the impounded water prevented a prior milldam upstream from being used, the court applied the Spanish Civil Law (Par. 3, title 32, law 18), which specifically provided that a man could not erect a mill near another so as to obstruct the current of water to that previously erected.[90] This case was cited as authority by the court in a 1921 case in which a riparian owner was allowed damages for injury caused by floodwaters backed up because a railroad had partially obstructed the river downstream.[91]

The court has recently taken a more direct approach in a case in which the damage caused was not brought about by an interference with drainage but by actual flooding caused by the obstruction. Under L.S.A.—Civil Code, Article 2315, which provides that: "Every act . . . that causes damage to another, obliges him by whose fault it happened to repair it . . .", a person building a "cofferdam" in a stream was required to compensate a person injured by the flooding of his land by waters backed up by the dam.[92]

In any event, it seems that, unless there is some form of agreement to the contrary between the parties,[93] any obstruction of a natural nonnavigable watercourse which causes water damage to another is actionable.

There have been no reported court decisions involving the right of an upper riparian owner to dam or obstruct a nonnavigable stream so as to cause the natural flow of the stream to be hindered, diminished, or stopped entirely and thereby reduce or cut off the flow which would benefit those below. Article 661 of the Code specifically provides that a riparian owner "cannot stop" a stream. Whether this means that he cannot diminish or partially obstruct the flow, or only that he cannot stop it completely, is not entirely clear. It is possible that the courts would interpret this provision in the interests of agriculture to allow a reasonable obstruction, but what this might be in any particular case is difficult to say.[94]

A case in 1885 involved the damming of an artificial canal so as to obstruct its flow which was used by an adjoining plantation. The court said a contractual agreement governed its use but that the contract was in accord with Articles 660, 661, and certain other Code

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[89] Hebert v. Champagne, 144 La. 659, 81 So. 217 (1919); Rodriguez v. Prevost, 129 La. 940, 57 So. 276 (1912).

[90] Boatner v. Henderson, 5 Mart. (N.S.) 186 (La. 1826).

[91] Miller v. Texas & P. Ry. Co., 148 La. 936, 88 So. 123 (1921).

[92] Magee v. Texas Construction Co., 227 La. 32, 78 So. 2d. 500 (1955). Also see note 77, supra.

[93] Or perhaps certain other extenuating circumstances such as those mentioned above in text at notes 87 to 89.

[94] Recall earlier discussions of reasonable use rule in considering extent of permissible irrigation under Article 661. See *Irrigation*, supra.

articles. It said that these articles, "are to the effect that the owner of the estate which owes the servitude, can do nothing tending to diminish its use, or to make it more inconvenient." It concluded that the dams involved, "were illegal obstructions, and that the plaintiff cannot be required to endure them, unless for a time in cases of unavoidable necessity . . ." While the court adhered to a rather strict rule of liability, it based this on rules adopted in earlier cases that were not directly in point. At any rate, as the case involved an artificial canal and apparently could have been decided by the terms of the contract, it is problematical whether it would be given much weight regarding the above question concerning the proper construction of the words "cannot stop" in Article 661.[95]

It may be noted also that legislation provides that: "No person diverting or impeding the course of water from a natural drain shall fail to return the water to its natural course before it leaves his estate without undue retardation of the flow of water outside his enclosure thereby injuring an adjacent estate." Violators may be fined and/or imprisoned.[96]

Another statute provides that no person shall willfully obstruct natural drainage creeks, bayous, or small rivers, "or any public or private drainage." Violation of this statute provides for a fine of from $25 to $100, and costs. In default of payment, imprisonment is provided for, and failure to remove an obstruction is prima facie evidence of willful intent.[97]

Navigable Watercourses

Definition

Watercourses may be classified as to their navigability. In Louisiana a river or stream is navigable in law when it is navigable in fact.[98] In determining whether it is navigable in fact, the court has applied the general rule followed by the United States Supreme Court in a case in 1874 (87 U.S. 430, 441) as follows:

> The capability of use by the public for purposes of transportation and commerce affords the true criterion of the navigability of a river, rather than the extent and manner of that use. If it be capable in its natural state of being used for purposes of commerce

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[95] Shaffer v. State National Bank, 37 La. Ann. 242 (1885). The case is discussed more fully under *Artificial Watercourses,* infra.

[96] L.S.A.—R.S. 38:218. Also see note 82, supra.

[97] L.S.A.—R.S. 38:215. In addition, R.S. 38:214 provides that no person shall dump or discharge any materials which might interfere with the drainage into any waters or drains. Violation of the statute calls for a fine of from $25 to $300.

[98] State v. Jefferson Island Salt Mining Co., 183 La. 304, 163 So. 145 (1935); State v. Sweet Lake Land & Oil Co., 164 La. 240, 113 So. 833 (1927); McClusky v. Meraux & Nunez, 186 So. 117, 120 (App. 1939). Particularly for purposes of determining bed ownership, the court has considered whether the water involved was navigable at the time of the state's admission to the Union. See *Ownership of Beds* and *Natural Lakes and Bayous,* infra.

Watercourses which are navigable in fact are classified as navigable in law.

> no matter in what mode the commerce may be conducted, it is navigable in fact, and becomes in law a public river or highway.[99]

The Louisiana court has indicated that the *capacity* of a watercourse for some commercial use, even though not *actually* so used, may be

[99] State v. Jefferson Island Salt Mining Co., 183 La. 304, 163 So. 145, 150 (1935). Accord: State v. Capdeville, 146 La. 94, 83 So. 421 (1919); Transcontinental Petroleum Corp. v. Texas Co., 209 La. 52, 24 So. 2d. 248, 253 (1945); Delta Duck Club v. Barrios, 135 La. 357, 65 So. 489, 490 (1914); Delta Duck Club v. Barrios, 135 La. 364, 65 So. 491 (1914).

considered.[100] While some reported decisions include the above-quoted reference to the "natural state" of a stream, the court in one case decided that a stream was nonnavigable partly on the grounds that it ". . . could not be made navigable by dredging and clearing the stream, . . ." at least without incurring great expense.[101]

In one case, the court quoted approvingly from a Massachusetts case as follows: "It is not every small creek in which a fishing skiff or gunning canoe can be made to float at high water which is deemed navigable, . . . it must be generally and commonly useful to some purpose of trade or agriculture." The court added: "It implies the possibility of transporting men and things."[102]

In another case, the court concluded that a stream could be considered navigable notwithstanding that ". . . its free navigation may be at times encompassed with difficulties by reason of natural barriers such as rapids and sandbars or accumulations of timber . . ."[103]

The court has said that the question of navigation is one of fact, depending upon the evidence in each case.[104] Evidence considered in one case where a stream was held to be nonnavigable included (1) the lack of any actual use of the stream by any water craft for the purpose of commerce, although small boats with detachable gasoline engines used it occasionally, (2) the treatment by the United State Government of

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[100] State v. Jefferson Island Salt Mining Co., State v. Capdeville, and Transcontinental Petroleum Corp. v. Texas Co., supra.

[101] Bodcaw Lumber Co. v. Kendall, 161 La. 337, 108 So. 664, 665-666 (1926).

Some later Federal decisions also have considered the possibility of artificial improvements. See United States v. Appalachian Power Co., 311 U.S. 377, 407-409 (1940) so holding in a case involving the licensing by the Federal Power Commission of a hydroelectric dam. The court said that navigability, for the purpose of the regulation of commerce, may arise after the admission to statehood. "In determining the navigable character of New River it is proper to consider the feasibility of interstate use after reasonable improvements which might be made." The court also said, "There must be a balance between cost and need at a time when the improvement would be useful." (Cited in dissenting opinion in State v. Aucoin, 206 La. 786, 20 So. 2d. 136, 160 (1944).

It may be noted that Federal legislation cited in the above Federal case, which gives the Federal Power Commission certain licensing powers, defines "navigable waters" for this purpose as bodies of water which in their "natural or improved condition" are "used or suitable for use" for transporting persons or property in interstate or foreign commerce, notwithstanding that they may be interrupted by "falls, shallows, or rapids compelling land carriage." See 16 U.S.C.A. sec. 796 (8).

Also see Laurent, Francis W., "Judicial Criteria of Navigability in Federal Cases," 1953 Wisconsin Land Review No. 1, p. 8, to the effect that somewhat different criteria have been followed for different purposes.

[102] Burns v. Crescent Gun and Rod Club, 116 La. 1038, 41 So. 249, 251 (1906).

[103] Goodwill v. Police Jury of Bossier Parish, 38 La. Ann. 752, 755 (1886). But in Egan v. Hart, 45 La. Ann. 1358, 14 So. 244 (1893), the court held the upper part of a bayou to be nonnavigable which dried up and became ". . . choked with rafts and filled with sand, reefs, etc . . ." at many places each summer. See 30 Tulane Law Rev. 332 (1956) regarding tests of navigability.

[104] State v. Capdeville, 146 La. 94, 83 So. 421, 425 (1919); Cert. den. Atchafalaya Land Co. v. Capdeville, 40 S. Ct. 346, 252 U.S. 581, 64 L. Ed. 1011 (1920).

the stream as nonnavigable, as shown by its authorization of the construction of stationary bridges across it, (3) the fact that it was narrow, filled with sand, gravel bars, stumps and logs, and had a fall of from 2½ to 5 feet to the mile, and, if cleaned out, its current would have been a torrent, (4) the considerable rise and fall of the stream in a few hours, and (5) the depth of the waters at average stage.[105]

The question of use by small boats vs. other uses of streams classified as nonnavigable under the above-described test has not been directly in issue in any case that has come to the authors' attention. The Supreme Court has said in one case that streams might be "floatable streams" serving as highways for the transportation of logs and other property.[106] This concept of "floatable streams" perhaps introduces a third class of watercourse to the normal classification of navigable and nonnavigable watercourses. The court said that persons other than the riparian owner might have rights in such a class of streams, but did not spell out what these rights might be. Apparently a riparian owner might be required to allow other persons (at least other riparian owners) to use the stream for the transportation of logs and other property.

The language used by the court as to floatable streams, however, was not necessary for a decision of the case under consideration and must be considered as merely an incidental statement, not carrying the full authority of the actual holding in the case. Moreover, not only has the language never been adopted by the court in any later decision (the case was decided in 1917), but the writers have been unable to discover any other mention of the concept of "floatable streams" in any reported appellate or Louisiana Supreme Court decision. Under these circumstances, it cannot be definitely said that the concept of "floatable streams" is accepted in Louisiana. At present, it seems that the only classes of watercourses that have legal significance are those which are and those which are not navigable.[107]

Ownership of Beds

The basic rule concerning the ownership of the beds of navigable rivers and streams is that the state owns all lands lying beneath the navigable waters, between the normal low watermarks.[108] (The Supreme Court has indicated that title to the beds of navigable rivers, streams,

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[105] Amite Gravel and Sand Co. v. Roseland Gravel Co., 148 La. 704, 87 So. 718, 719 (1921). See also State v. Capdeville, 146 La. 94, 83 So. 421 (1919); Transcontinental Petroleum Corp. v. Texas Co., 209 La. 52, 24 So. 2d. 248, 253 (1945), where the width, depth, and location of the waters were considered.

[106] Palmer Co. v. Wilkinson, 141 La. 874, 75 So. 806, 810 (1917).

[107] L.S.A.—R.S. 38:291 provides that any artificial waterway created by any levee district, where the waterway is navigable in fact and connects with any navigable water, may be dedicated by the levee district as a waterway subject to free and unrestricted navigation by the public. See *Artificial Watercourses*, infra, for a brief discussion of navigation canals.

[108] State v. Richardson, 140 La. 329, 72 So. 984, 991 (1916); State v. Capdeville, 146 La. 94, 83 So. 421, 425 (1919); Wemple v. Eastham, 150 La. 247, 90 So. 637 (1922);

and lakes was acquired by the state on its admission to the Union by virtue of its sovereignty.[109]) This land cannot now be transferred to private ownership by the state, as the Louisiana Constitution of 1921 provides:

> Nor shall the Legislature alienate, or authorize the alienation of the fee of the bed of any navigable stream, lake or other body of water, except for purposes of reclamation.[110]

Prior to 1921, however, there was no Constitutional limitation on the power of the Legislature to alienate the beds of navigable waters, and it was within the Legislature's power to issue patents to these lands. A 1912 act provides that actions to annul any patent issued by the state, and duly signed and recorded in the prescribed manner, must be brought within 6 years reckoned from the day of the issuance of the patent or the passage of the act.[111] In 1954, the court held that,

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[108] (*Continued*)
Smith v. Dixie Oil Co., 156 La. 691, 702, 101 So. 124 (1924); Pizanie v. Gauthreaux, 173 La. 737, 741, 138 So. 650 (1931).

Moreover, the public has rights to use certain lands lying along a navigable river for certain purposes connected with navigation or the making or repairing of levees, etc. See e.g., L.S.A.—C.C. Arts. 455 and 665; and other statutes and constitutional provisions as discussed in Delaune v. Bd. of Comm'rs, Pontchartrain Levee Dist., 230 La. 117, 87 So. 2d. 749 (1956); Hebert v. James and Co., 224 La. 498, 70 So. 2d. 102, (1954); Bd. of Comm'rs, Pontchartrain Levee Dist. v. Baron, 236 La. 846, 109 So. 2d 441 (1959). Among other things, these cases discuss L.S.A.—Const. 1921, Art. 16, sec. 6 regarding compensation for property used or destroyed for levees or levee drainage purposes.

[109] Transcontinental Petroleum Corp. v. Texas Co., 209 La. 52, 24 So. 2d. 248, 253 (1945). See also Smith v. Dixie Oil Co., 156 La. 691, 101 So. 24 (1924); State v. Bozeman, 156 La. 635, 101 So. 4 (1924); Ellerbe v. Grace, 162 La. 846, 111 So. 185 (1927); State v. Erwin, 173 La. 507, 138 So. 84 (1931); Miami Corp. v. State, 186 La. 784, 173 So. 315 (1937), cert. denied 302 U.S. 700. See also 2 Stat. 666; 33 U.S.C.A. sec. 10; 2 Stat. 642 and 703.

It should be noted, however, that the U.S. Supreme Court has indicated that the Federal government could validly have conveyed the beds under navigable waters in the Louisiana and other territories in furtherance of appropriate public purposes, to a limited extent, although it otherwise held such beds in trust for the benefit of the states later created out of the territories. In holding that the beds under nonnavigable waters in the Oklahoma part of the Louisiana Territory had been conveyed to an Indian tribe prior to Oklahoma's admission as a state, the court found it unnecessary to decide whether the bed could validly have been conveyed to the tribe even if the water were navigable. Brewer—Elliott Oil & Gas Co. v. United States, 260 U.S. 77, 85-86 (1922), affirming 270 F. 100 (8th C.C.A., 1920), which affirmed 249 F. 609 (1918).

Questions regarding the validity and effect of old Spanish grants to lands in the Louisiana Territory are considered in Menard's Heirs v. Massey, 49 U.S. (8 How.) 293 (1850), discussed in Begnaud v. Grubb and Hawkins, 209 La. 826, 25 So. 2d. 606, 610 (1946).

Questions regarding the Oyster Statutes (See L.S.A.—R.S. 56:421 *et seq.*) declaring that certain waterbeds should remain the property of the state are considered in Onebane, Joseph, "Who Owns the Water Bottoms?" 6 La. Bar Journal No. 1, p. 46 (May, 1958).

[110] L.S.A.—Const. of 1921, art. 4, § 2.

[111] Acts 1912, No. 62, § 1. This section also applied to "any transfer of property by any sub-division of the state . . ." It is now embodied in L.S.A.—R.S. 9:5661.

by virtue of this act, the state could not in the 1954 case attack the validity of a patent so issued and recorded to the beds of navigable waters. While the patent in question was issued in 1874, the court apparently would have held likewise if the patent had been issued anytime before the Constitutional limitation of 1921.[112]

Later in 1954, the Legislature, apparently not satisfied with this decision, passed an act aimed at nullifying it. The act provides that the intent of the 1912 Legislature was that the prescriptive statute should not apply to the transfer of navigable waters or the beds of same,[113] that any patent or transfer of navigable waters and the beds thereof is null and void,[114] and that no statute enacted by the Legislature shall be construed as to validate by reasons of prescription any patent or transfer of navigable waters or the beds thereof.[115] It would seem possible that this act might be unconstitutional as retroactive legislation divesting vested rights[116] although it has not as yet been passed upon by the court.[117]

The state also has been declared to be the owner of the beds of navigable rivers under the Civil Code[118] and of the beds of navigable waters by at least two other statutes.[119] But the court in the above-mentioned case reasoned that, no matter what the policy of the Legislature might have been regarding the ownership of beds of navigable waters, it was within the Legislature's power to grant ownership thereof to private individuals prior to the 1921 constitutional restriction. While apparently there had been no legislative pronouncements authorizing the issuance of patents to beds of navigable waters prior

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112 California Co. v. Price, 225 La. 706, 74 So. 2d. 1 (1954), decided by a divided court. See also 234 La. 338, 99 So. 2d. 743 (1957). Thus, the last year in which the state might have attacked any such patents was 1927—six years after the 1921 cut-off date for validly issuing such patents.

113 La. Acts 1954, No. 727, § 1, now embodied in L.S.A.—R.S. 9:1107.

114 La. Acts 1954, No. 727, § 2, now embodied in L.S.A.—R.S. 9:1108.

115 La. Acts 1954, No. 727, § 3, now embodied in L.S.A.—R.S. 9:1109.

116 See L.S.A.—Const. of 1921, Art. 4, § 15.

In accord with this view, see Hebert, P. M., and Lazarus, C. E., "Legislation Affecting the Civil Code," 15 La. Law Rev. 1, 23-24 (1954); Onebane, Joseph, "Who Owns the Water Bottoms?" 6 La. Bar Journal No. 1, p. 46, 64 (May, 1958).

117 It may be noted that the court in the above-mentioned case indicated with respect to certain prior legislation that "if the recital be construed as referring also to previously disposed of property, it would be subject to a constitutional attack as divesting vested rights." California Co. v. Price, 225 La. 706, 74 So. 2d. 1, 7 (1954).

118 Article 453 of the Code provides that the beds of navigable rivers are publicly owned "as long as the same are covered with water." (See note 124, infra.) The bed of a navigable stream that was nonnavigable in 1812 may have been privately owned. (See *Nature of Riparian Rights: Ownership of Beds*, supra.) It seems doubtful that when it later became navigable the state thereby acquired title to its bed. See 65 C.J.S., Navigable Waters, sec. 97.

119 L.S.A.—R.S. 9:1101 and L.S.A.—R.S. 56:421. See *Nature of Riparian Rights*, supra. See also discussion of possible application of La. Civil Code, Art. 482 to navigable lakes and bays, in California Co. v. Price, 225 La. 706, 74 So. 2d 1, 10-11 (1954).

to 1912, the court indicated that because of the 1912 prescriptive statute, the validity of such grants cannot be attacked at this late date.[120]

Aside from these possible exceptions, however, the state now owns in fee, and cannot transfer ownership of, the beds of any navigable waters.[121]

Right to Use Water

Although there is little authority on which to base an opinion, it seems probable that L.S.A. Civil Code, Article 661, which gives riparian owners certain rights to use running water,[122] either is inapplicable to navigable rivers or streams or is subservient to provisions of the Code and Revised Statutes that give the state and public rights in such streams.

Article 661 does not explicitly distinguish between navigable and nonnavigable watercourses. This is in direct contrast to the comparable French Civil Code provision, which definitely exempted navigable streams from its application.[123] As the Louisiana provision is almost certainly based on the French law, it would seem that there is some significance in this omission. It would have been a simple matter for the codifiers to have inserted this exception in the Louisiana provision had they intended it to apply.

On the other hand, in L.S.A.—Civil Code, Article 453, navigable rivers are cited as an example of public things, the property of which is vested in a whole nation, and the use of which is allowed to all its members.[124] This is in accord with the early French treatment of the subject and seems to indicate that the French law was meant to be followed. It is not easy to reconcile the vesting of navigable rivers in the public by Article 453 with an interpretation of Article 661 which might give to the riparian owners a vested right in their use.

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120 California Co. v. Price, 225 La. 706, 74 So. 2d. 1 (1954).

121 See *Nature of Riparian Rights*: *Ownership of Beds*, supra., regarding streams that have ceased to be navigable.

122 See Appendix, infra.

123 Code Napoleon, 1804, Art. 644: "He whose estate borders on running water other than that which is declared to belong to the public domain by Article 538 under the title *of the Classification of Property*, may use it as it runs for the purpose of watering his estate."

Par. 2 was similar to Par. 2 of L.S.A.—Civil Code Art. 661. See note 51, supra. (Translation from L.S.A.—Civil Code Art. 661, History and Text of Former Codes.)

Code Napoleon, 1804, Art. 538, referred to in Art. 644, declared navigable streams to be a part of the public domain; hence these streams were outside the scope of Art. 644. Riparian owners had no special rights to use navigable waters according to Planiol, Marcel, *Treatise on the Civil Law*, op. cit. (note 85), Vol. 1 No. 2428. See also Wiel, S.C., "Waters: American Law and French Authority," op. cit., note 61, 33 Harvard Law Review, p. 152.

124 L.S.A.—Civil Code, Art. 453: "Public things are those, the property of which is vested in a whole nation, and the use of which is allowed to all the members of the nation: Of this kind are navigable rivers, seaports, roadsteads and harbors, highways and the beds of rivers, as long as the same are covered with water . . ."

See also Article 450 in Appendix, infra.

The Legislature evidently intended the state to have paramount rights in navigable waters, for in L.S.A.—R.S. 9:1101 it expressly provided ". . . that the ownership of the water itself . . .is vested in the state and that the state has the right to enter into possession of these waters when not interfering with the control of navigation exercised thereon by the United States of America."[125]

It may be noted also that while the beds of nonnavigable streams generally belong to the riparian owners, the beds of navigable rivers and other navigable waters generally belong to the state.[126] L.S.A.—Civil Code, Article 505 provides: "The ownership of the soil carries with it the ownership of all that is directly above it . . ." Although running water itself cannot be owned privately,[127] the article may nevertheless lend some support to the proposition that the state and public have paramount rights to use such waters.[128]

With respect to the use of navigable rivers, the court in an 1883 case refused to enjoin a company owning land along the Mississippi River (whose land was separated from it only by a public levee and street) from laying pipes to the river to withdraw water for its domestic and manufacturing purposes.[129] The injunction was requested by a waterworks company that was supplying the City of New Orleans with water under an exclusive franchise to do so. The court indicated that the waterworks company ". . . in common with all the inhabitants of the city, possessed, independent of any legislative grant or concession, the right to draw water from the river for its own purposes, and to supply the city and its inhabitants with it." Although the company had acquired an exclusive charter to supply the city, it contained an exception allowing the city to grant permits to "contiguous" landowners

[125] The Legislature perhaps could not have divested by this pronouncement rights which may have been vested in individuals prior to the passage of the act in 1912. See note 52, supra. But since L.S.A.—Civil Code, Article 453, which was enacted previously, clearly states that navigable rivers are public, it seems unlikely that any riparian rights to use these waters are vested in private persons.

[126] See *Ownership of Beds*, and *Nature of Riparian Rights*: *Ownership of Beds*, supra.

[127] See *Nature of Riparian Rights*, supra.

[128] An analagous situation exists in the use of oil and gas. The court has said that even though oil and gas are insusceptible of ownership in their free state beneath the surface of the ground, the right to reduce them to possession exists in the owner of the soil above them. McCoy v. Arkansas Natural Gas Co., 175 La. 487, 143 So. 383, 85 ALR 1147, cert. denied, 287 U.S. 661, (1932); Continental Securties Corporation v. Wetherbee, 187 La. 773, 175 So. 571 (1937). If the analogy is sound, it would seem that the owners of the soil beneath running water would have a right to reduce it to possession also. See note 54, supra. This would mean that the state, being the owner of the soil beneath navigable streams, would have the right to utilize the waters from these streams, and that the riparian owner would not have a vested right in these streams. The same reasoning would, of course, strengthen the argument that riparian owners have vested rights to utilize nonnavigable running water.

[129] New Orleans Waterworks Co. v. Louisiana Sugar Refining Co. and City of New Orleans, 35 La. Ann. 1111 (1883); dismissed for want of jurisdiction in 125 U.S. 18 (1888).

to lay water pipes to the river for their own use. But the court said that even without such an exception, riparian landowners: ". . . had, clearly, not only the privilege, *in common with all others*, to draw the running water from the river for domestic purposes, *ad lavandum et potendum*, but also, on principle, that, without the need of a previous permission, of laying pipes from the river to their premises, to draw the water necessary for their use." (Emphasis added.)[130] However, the nature of the privilege or right of riparian landowners or others to use the river was not clearly defined, nor was any significance of the navigability of the river discussed.

In any event, the rights to drainage granted under L.S.A.—Civil Code, Article 660, probably are applicable to both nonnavigable and navigable streams, and any infringement of the rights of riparian or other landowners granted under it would seem to furnish a cause of action to the injured party.[131] On the other hand, it is clear that the public has the right to use navigable waters for fishing[132] and navigation.[133]

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[130] The city had granted the defendant company permission to lay pipes to the river for its domestic and manufacturing purposes. The court indicated that this constituted a valid exercise of its police power to regulate the laying of pipes across the river bank and public street.

The court did not mention Article 661 of the L.S.A.—Civil Code dealing with riparian rights. But it did cite Articles 450, 453, 455, and 457 of the Code, which deal with common and public things and the definition of river banks, in connection with its assertion that the city "had the right of permitting the defendant company to lay pipes and conduits across the quay and through the streets, from the river to within its factory limits, for the purpose of supplying itself with the water needed for its objects."

In the appeal of this case to the U.S. Supreme Court, that court noted, at 125 U. S. 32, that this case was distinguishable from an earlier case where it had enjoined the taking of water from the same river for use in a hotel, partly on the grounds that in the former case the defendant was not an owner of land "contiguous to the river." New Orleans Water Works Co. v. Rivers, 115 U.S. 674 (1884). However, in that case the court seems to have been more concerned with the above-mentioned exception of "contiguous" owners in the charter of the waterworks company than with any question of riparian rights of such owners. Other Federal cases involving this same charter include New Orleans Water Works Co. v. Southern Brewing Co., 36 Fed. 833 (1888), aff'd in 145 U.S. 649 (1891), and New Orleans Water Works Co. v. New Orleans, 164 U.S. 471 (1896).

In Doiron v. O'Bryan, 218 La. 1069, 51 So. 2d 628, 632 (1951), the court included a definition of riparian rights, as: "The rights of owners of lands on the banks of watercourses relating to the water, its use, ownership of soil under the stream, accretions, etc." See *Nature of Riparian Rights*, supra. This case involved a navigable lake, but it was dealing only with the question of ownership of formerly submerged land adjoining the lake. It may be doubted whether the quoted statement would have any material significance on the question of rights to use the waters of navigable rivers, streams, or lakes.

[131] See *Nature of Riparian Rights*, supra.

[132] L.S.A.—Civil Code, Art. 453, supra, note 124, provides that "every man has a right freely to fish in rivers, ports, roadsteads, and harbors." See also Burns v. Crescent Gun and Rod Club, 116 La. 1038, 41 So. 249 (1906) and Haynes v. Smith discussed in note 308, infra.

[133] See L.S.A.—Civil Code, Art. 453 (supra, note 124) and R.S. 9:1101 (infra, Appendix). Also see 33 U.S.C.A. sec. 10 which provides that "all the navigable rivers

Although the right to free navigation of navigable rivers is given the public, the court in 1931 cast some doubt upon how far the state courts would go in protecting the interest of an individual in this right. The court was presented with a case in which the plaintiff had constructed a canal upon his own land, diverting water from a navigable stream. According to the court, the evidence was conflicting as to whether the river beneath the point of the diversion had been rendered nonnavigable by the diversion, and, if so, whether by the action of the plaintiff in diverting water from the river. The canal had been constructed for the purposes of navigation, and tolls were apparently charged. The defendant felt, however, that since the water had been diverted from a navigable stream, he had the right to use the canal without cost. The plaintiff then sought to enjoin the defendant from such free use of the canal. He was granted the injunction in the lower court. The State Supreme Court affirmed this decision on the grounds that the defendant could not, as a remedy for a wrongful diversion by plaintiff, use the canal free of charge, as such a remedy was not recognized in Louisiana.

In the course of the decision, the court used the following language:

> And of course there is ample authority for the proposition that one may be enjoined from diverting so much of the flow of navigable streams as to render them unnavigable.[134]
>
> But in our opinion, the Congress of the United States, which has plenary powers over the navigable waters of the nation, has placed the whole subject-matter of diverting the water of a navigable stream under the jurisdiction of the Secretary of War, who is far more capable of dealing with such matters than are the courts, since he can get his information at first hand and on the spot; and it is within his discretion to say how much, and under what con-

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[133] (*Continued*)
and waters in the former territories of Orleans and Louisiana shall be and forever remain public highways." (Derived from an 1811 act relating to adjustment of land claims and sale of public lands in these territories. 2 Stat. at 666.) Act of Congress April 8, 1812; 2 Stat. 701, which admitted Louisiana into the Union, contained the following provision: "*Provided* that it shall be taken as a condition upon which the said state is incorporated into the Union, that the river Mississippi, and the navigable rivers and waters leading into the same, and into the Gulf of Mexico, shall be common highways and forever free, as well to the inhabitants of the said state as to the inhabitants of other states and the territories of the United States, without any tax, duty, import, or toll therefor imposed by the said state . . ." 2 Stat. 703. Louisiana cases construing this provision include Harvey v. Potter, 19 La. Ann. 264, 92 Am. Dec. 532 (1867); Boykin & Long v. Shaffer, 13 La. Ann. 129 (1858); Carondelet Canal & Navigation Co. v. Parker, 29 La. Ann. 430, 29 Am. Rep. 339 (1877).

Also see California Co. v. Price, 225 La. 706, 74 So. 2d. 1, 3, 11 (1954) where it was conceded that even though the bed of a navigable bay was susceptible of private ownership, the waters were subject to public rights of navigation, commerce, and fishing. This possibility of private bed ownership and public rights in the waters is criticized in a dissent to the opinion, at page 13.

[134] The court cited no authority, however.

ditions, the water of navigable streams may be diverted. See Act Cong. March 3, 1899 § 10 (33 U.S.C.A. § 403).[135]

The holding in the case would seem to be only that the defendant could be enjoined from using the canal which the plaintiff had built on his land, leaving defendant to other remedies if the plaintiff's diversion was wrongful. But the above-quoted language indicates that the defendant would not have had a remedy in the Louisiana courts. The act of Congress cited by the court,[136] however, does not read as though exclusive jurisdiction over diversion of navigable waters had been placed in the Secretary of War (now called Secretary of the Army).[137] In fact, cases noted under this statute in the *United States Code Annotated* indicate that concurrent Federal and State jurisdiction may be exercised.[138] Although the Louisiana Supreme Court has neither repudiated nor modified the language set forth above in any subsequent case, the writers do not feel that it would today refuse jurisdiction if faced squarely with a case concerning the diversion of navigable rivers.

Congress has granted the Corps of Engineers, U. S. Army, certain regulatory authority over the construction of dams and alteration of the course or capacity of navigable waters.[139] The Federal Power Com-

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[135] Ilhenny v. Broussard, 172 La. 895, 135 So. 669, 670 (1931).

Similarities between the Federal and Louisiana Courts' criteria for determining whether a stream is navigable are discussed in 30 Tulane Law Rev. 332 (1956). Also see *Navigable Watercourses: Definition*, supra. Congress has specifically declared Bayou Cocodrie (from its source to its junction with Bayou Chicot) and Eagle Lake to be nonnavigable for Federal purposes. 33 U.S.C.A. secs. 21 and 47.

[136] 33 U.S.C.A. § 403: ". . .; and it shall not be lawful to excavate or fill, or in any manner to alter or modify the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor of refuge, or inclosure within the limits of any breakwater, or of the channel of any navigable water of the United States, unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of War prior to beginning the same."

[137] The Secretary of War was changed to Secretary of the Army by Act July 26, 1947, c. 343, Title II § 205 (a), 61 Stat. 501.

[138] Leitch v. City of Chicago (C.C.A. Ill.), 41 F 2d. 728, cert. den., 282 U.S. 891, 51 S. Ct. 106, 75 L. Ed. 786 (1930); Robinson v. Silver Lake Ry. & Lumber Co., 153 Wash. 261, 279 P. 1109 (1929); North Shore Boom & Driving Co. v. Nicomen Boom Co. (Wash.), 29 S. Ct. 355, 357, 212 U.S. 406, 53 L. Ed. 574 (1909); Cummings v. Chicago (Ill.), 23 S.Ct. 472, 477, 188 U.S. 410, 47 L. Ed. 525.

[139] See, e.g., 30 Stat. 1151; 33 U.S.C.A. secs. 401 and 403. With respect to the withdrawal or diversion of such waters, see Sanitary Dist. v. United States, 266 U.S. 405 (1925); United States v. Ormsbee, 74 F. 207 (1896).

The Corps of Engineers also has engaged in several channel-improvement and other projects in aid of navigation. The writers have been informed that in planning projects the corps gives consideration to the provision of liberal supplies of fresh water, as well as sufficient water for navigation purposes in waterways during low-water periods. (Based on information supplied by Col. G. M. Cookson, District Engineer, U. S. Army Engineer District, New Orleans.)

It may be noted that La. Acts 555 (1958) proposed an amendment of the La. Const. of 1921, which has been ratified by the people. Art. IV, sec. 12, as amended, property or rights of way, easements, or other servitudes, now owned or later acquired, to the United States for use in connection with the construction, maintenance and improvement of artificial and natural navigable waterways and river and harbor

mission also has certain regulatory authority over such waters, particularly with respect to the construction of hydroelectric power dams.[140]

Contrary to the expressed lack of intention to take jurisdiction over cases involving diversion of navigable streams, the Louisiana Supreme Court has clearly and often held that a navigable stream cannot be obstructed without authorization from the state.[141] Obstruction, in fact, is made a criminal act by two separate statutes. The first of these statutes deals with *aggravated obstruction* which is the intentional or criminally negligent placing of anything, or performance of any act, on any navigable waterway *wherein it is foreseeable that human life might be endangered.*[142] The second deals with *simple obstruction,* which is the intentional or criminally negligent placing of anything, or performance of any act, on any navigable waterway *that will render movement thereon more difficult.*[143] In 1958 the Legislature enacted the Uniform Pleasure Boating Act which specifies various rules of law and requirements

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139 (*Continued*)
or flood-control works, or in connection with parks, forest preserves, canals, and irrigation districts. The state or any of its agencies also may maintain in cooperation with or on behalf of the United States or any of its agencies rights of way, servitudes, or easements acquired in connection with the construction or improvement of artificial or natural waterways.

140 See, e.g., 41 Stat. 1065 and 1353, 46 Stat. 798, 49 Stat. 839; 16 U.S.C.A. sec. 797 (e). It may also be noted that in 1958 the Congress enacted legislation "to provide for more effective integration of a fish and wildlife conservation program with Federal water-resource developments, and for other purposes." 72 Stat. 563, amending earlier legislation. This act provides, among other things, that the head of the agency exercising administration over the water resources of the state (See State Wildlife and Fisheries Commission, infra), and the U.S. Fish and Wildlife Service, Department of the Interior, shall be consulted with a view to the prevention of loss of and damage to wildlife resources, whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, or otherwise controlled or modified for any purpose by any Federal department or agency or by any public or private agency under Federal permit or license. This does not apply, however, to "projects for the impoundment of water where the maximum surface area of such impoundments is less than ten acres . . ."

141 Goodwill v. Police Jury of Bossier Parish, 38 La. Ann. 752 (1886). (Injunction granted to prevent parish from filling in navigable stream); Ingram v. Police Jury of the Parish of St. Tammany, 20 La. Ann. 226 (1868). (Injunction granted to prevent parish from building low bridge over navigable stream); Clement v. Louisiana Irrigation & Mill Co., 129 La. 825, 56 So. 902 (1911). (Mandatory injunction for removal of dam across navigable river); Blanchard v. Abraham, 115 La. 989, 40 So. 379 (1906); Armistead v. Shreveport & R.R. Val. Ry. Co., 108 La. 171, 32 So. 456 (1901); Darrall v. Southern Pac. R. Co., 47 La. Ann. 1455, 17 So. 884 (1895); Houston v. Police Jury of St. Martin, 3 La. Ann. 566 (1848).

142 L.S.A.—R.S. 14:96: "Aggravated obstruction of a highway of commerce is the intentional or criminally negligent placing of anything, or performance of any act, on any railway, railroad, navigable waterway, road, highway, thoroughfare, or runway of an airport, wherein it is foreseeable that human life might be endangered.

"Whoever commits the crime of aggravated obstruction of a highway of commerce shall be imprisoned at hard labor for not more than fifteen years."

143 L.S.A.—R.S. 14:97: "Simple obstruction of a highway of commerce is the intentional or criminally negligent placing of anything or performance of any act on

applicable to the operation of pleasure boats.[144] The act provides that its provisions shall be construed to supplement applicable federal laws and regulations when not expressly inconsistent therewith. The act requires all political subdivisions and peace officers and game wardens to enforce its provisions, but prohibits the adoption of local pleasure boating regulations by political subdivisions.

No reported Louisiana court decision or Federal court decision arising in the state, appears to have dealt with the question of whether riparian or other uses of nonnavigable watercourses or parts of watercourses which connect with navigable waters shall be subject to limitation if they affect adversely navigation or other public uses of the navigable waters. However, the U.S. Supreme Court and other Federal courts have so indicated in certain cases dealing with questions of Federal control.[145]

Nonriparian Use

Although under the "riparian doctrine," which is followed in Louisiana, those who own lands on the banks of certain watercourses are given certain rights to use water which probably are not given to those who do not own such lands, it is clear that riparian owners are not granted the *exclusive* use of *all* the watercourses of the state.

In the case of navigable watercourses, it is questionable whether riparian owners have materially greater rights to use the waters than the public generally, although they generally have the advantage of easier access to the river. However, as this subject was covered under the preceding topic, the discussion here is limited to the rights of nonriparian owners in nonnavigable watercourses.

Article 661, L.S.A.—Civil Code, grants to riparian owners certain rights to the use of running water, but it does not expressly exclude nonriparian owners from the use of such water.[146] Since nowhere in the Code, statutes, or reported court decisions are nonriparian owners

[143] (*Continued*)
any railway, railroad, navigable waterway, road, highway, thoroughfare, or runway of an airport, which will render movement thereon more difficult.

"Whoever commits the crime of simple obstruction of a highway of commerce shall be fined not more than two hundred dollars, or imprisoned for not more than six months, or both."

[144] L.S.A.—R.S. 34:850.1 et seq. Among other rules, pleasure boats shall not be operated in areas legally designated and marked as restricted areas for swimming or other purposes.

[145] See, e.g., Oklahoma v. Atkinson Co., 313 U.S. 508, 525 (1940) with respect to the power of flood control and navigation; and Georgia Power Co. v. Federal Power Commission, 152 F. 2d. (C.C.A. 5th) 908, 913 (1946) with respect to a non-Federal hydroelectric power dam, construing the statutory regulatory power of the Federal Power Commission, cited earlier, with particular reference to 16 U.S.C.A. sec. 817.

[146] See Appendix, infra.

The usual French interpretation of the comparable provision (sec. 644 of the Code Napoleon 1804) limited the use of nonnavigable streams primarily to riparian landowners, although nonriparian use rights could be acquired, as against

expressly granted any rights in such water, it would seem unlikely that anyone has a *duty* to allow nonriparian owners to use the water. (It has not been clearly decided how Article 450 regarding "things which are in common . . . such as . . . running water" shall apply to nonnavigable watercourses. But it would seem probable that its provision "which all men may freely use, conformably with the use for which nature has intended them" would be held to be subject to the provisions in Article 661, which give riparian landowners certain rights in running water.[147])

Such questions may arise when a nonriparian owner has gained access to a stream through some type of arrangement with a riparian owner, or by other means. It would seem that at least two basic types of arrangements might be made to allow a nonriparian owner access to a stream. First, the riparian owner might grant a mere right of way or passage to the stream; and second, he might grant his rights, in whole or in part, to the water itself.

When a mere right of way to the stream has been granted to a nonriparian owner by a riparian owner, and the nonriparian owner is using the water from the stream, the question arises as to whether a second riparian owner can maintain an action against the nonriparian user.[148] If, for example, the nonriparian owner is withdrawing water

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[146] (*Continued*)
particular riparians, by such means as purchase, condemnation, or prescription—according to Wiel, S. C., "Origin and Comparative Development of the Law of Watercourses in the Common Law and in the Civil Law," 6 Calif. Law Rev. 245 and 342, at pp. 259 and 365 et. seq. (1918).

The author added, at p. 350, that such rights of use were given to riparian owners because of the inconveniences and dangers which the presence of the waters often cause. (Incidentally, the French irrigation law of April 29, 1845, removed all doubt that riparian owners could use water on nonriparian estates owned by them and gave them special rights in connection with the traversing of intervening estates, according to Planiol, Marcel, *Treatise on the Civil Law*, op. cit., note 85, Vol. 1, No. 2417.)

[147] See Article 450 in Appendix, infra; Palmer Co. v. Wilkerson, supra, note 52; Shaffer v. State National Bank, supra, note 59; 16 La. L. Rev. 500, 506 (1956); and L.S.A.—Civil Code, Vol. 3, pp. 9 and 12.

The state may now own the running waters in natural rivers and streams, by virtue of L.S.A.—R.S. 9:1101. But the beds of nonnavigable streams that were nonnavigable in 1812 generally are owned by the riparian owners. See *Nature of Riparian Rights*: *Ownership of Beds*, supra. The effect, if any, of such ownership of running waters by the state, and of the beds by the riparian owners, on rights to use the waters in nonnavigable watercourses has not been clearly decided. See text at notes 53 and 54, supra.

[148] Article 727, L.S.A.—Civil Code, cites as examples of conventional discontinuous servitudes the rights of passage and of drawing water. Thus, it would seem possible for the owner of riparian land to create, by any act sufficient to transfer title, a real right in the owner of nonriparian land to convey water across the riparian land. See Articles 727, 743, and 756, L.S.A.—Civil Code. Also see note 62, supra. (Or he might create a personal right to do so in the nonriparian owner that would not be attached to the ownership of the nonriparian land. See L.S.A.—Civil Code, Articles 757 and 758.) However, the question of the nonriparian owner's right to withdraw water from the watercourse would still remain unanswered.

from a nonnavigable stream with which to irrigate his lands that do not lie on the watercourse, can lower riparian owners maintain an action against the withdrawer with a showing of actual or impending damage caused by this withdrawal? Can they maintain an action if actual or impending damage cannot be shown? Can both an action for damages and injunctive relief be maintained?

These questions must be left unanswered, as there appears to be very little authority upon which to base answers. It would seem probable that, in general, a showing of damage would form the basis for a stronger case than when damage cannot be shown, but we cannot make a more detailed prediction of what the answers might be.

When a riparian owner grants his *rights* in the stream to a nonriparian owner, a different problem is posed. Here the question is not so much a matter of the rights of the nonriparian owner as such, but rather a matter of the right of a riparian owner to transfer his riparian rights to the nonriparian owner. As between the transferring riparian owner and the nonriparian owner, a contract transferring riparian rights might be binding. Article 752, L.S.A.—Civil Code, provides that ". . . servitudes . . .which result from the situation of places, may be altered by the agreement of the parties, provided the public interest does not suffer thereby." This would seem clearly to permit alteration of the riparian servitude as between upper and lower landowners.[149] It might also provide some support for the validity of contracts between riparian and nonriparian landowners. But it is less likely that other riparian owners on the stream would be bound by such an arrangement without their consent.[150]

Article 654 of the Code reads as follows:

> Servitude is a right so inherent in the estate to which it is due, that the faculty of using it, considered alone and independent of the estate, cannot be given, sold, let or mortgaged without the estate to which it appertains, because it is a servitude which does not pass to the person but by means of the estate.

This article would seem to indicate that the riparian owner's right to use running water, a servitude under Article 661, could not be transferred to a nonriparian owner for the use of his nonriparian land.[151]

Although there are no State Supreme Court cases touching on this point, in an appellate court case, a contract by which the owner of land on one side of a bayou allowed a nonriparian owner to take water from the bayou and convey it across his riparian land was upheld against the objection of the owner of the land on the opposite side

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[149] See note 63, supra, regarding the execution of such a contract.

[150] He might acquire such a right as against specific riparian owners through contractual agreements with them. See note 62, supra.

The foregoing three sentences are in general accord with the usual French interpretation of the Code Napoleon (1804) as described in Wiel, op. cit. (note 146) at pp. 365-367.

[151] Also see L.S.A.—Civil Code, Arts. 652 and 653.

of the bayou.[152] But in this case, the court was not sure whether the bayou was a running stream or still water. Moreover, although the court felt that probably it was *not* a running stream, it did not indicate what difference it would have made if it had been. The plaintiff alleged that "under the laws of this state" the defendant had "no right in or to said water, he not being a riparian owner . . ." But the court did not deal with this question. It refused to enjoin the defendant's use solely on the basis of the general rule that an injunction would not be issued unless actual or impending damages were shown.

From the above, it would seem possible that nonriparian owners might have a privilege to withdraw water from nonnavigable streams at least as long as they have access to the streams and are neither injuring nor threatening to injure riparian owners. However, there seems to be little upon which to base an opinion as to nonriparians' rights to use the water of nonnavigable streams.

There is also uncertainty regarding the question of the use of the waters of a nonnavigable stream by a riparian owner on *non*riparian land that he may own or rent. Recall that Article 661, L.S.A.—Civil Code, provides only that "He whose estate borders on running water may use it as it runs, for the purpose of watering his estate, or for other purposes."[153] This, in turn, raises the question of the nature of riparian land.

Nature of Riparian Land

The court has said that riparian rights are: "The rights of owners of land on the *banks of watercourses* relating to the water, its use . . ., etc."[154] (Emphasis added.) This suggests that riparian lands at least include those which lie *on the banks* of rivers and streams. The quotation above is contained in an opinion dealing with rights to land adjoining and underlying a lake, and there are, in fact, no cases reported in which the court has decided what constitutes riparian land for the purpose of deciding rights to use running water. This includes the question of how far back from the watercourse a tract of land may extend and still be considered riparian land.[155] There are, however, a

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[152] Jackson v. Walton, 2 La. App. 53 (1925). The case is discussed more fully later, under *Natural Lakes and Bayous.*

[153] See *General Nature of Riparian Rights: Right to Use of Water,* supra.

[154] Doiron v. O'Bryan, 218 La. 1069, 51 So. 2d. 628 (1951). See note 130, supra.

[155] Courts in some other states have held or said that land must be within the watershed of a watercourse to be considered riparian to it. See 56 Am. Jur., Waters, sec. 278. Courts in some states have further held or said (1) that riparian land does not include subsequent additions of nonriparian tracts to the original riparian tracts of land, and (2) that if a part of a riparian tract of land that is not contiguous to the stream is conveyed to another, the part conveyed ceases to be riparian land (unless it is otherwise provided in the conveyance), even though it may be later reunited with the riparian tract. See 56 Am. Jur., Waters, sec. 277.

On the other hand, according to Wiel, op. cit., (note 146) at p. 349, et. seq., the usual French interpretation of Art. 644 of the Code Napoleon (1804), which was similar to Art. 661 of the Louisiana Civil Code, was that what constituted ri-

great number of cases involving riparian lands that are concerned with the ownership of land adjoining and underlying streams and rivers. As it would seem likely that riparian lands would be the same for both purposes, at least in many instances, we here examine the law concerning the riparian rights to soil adjoining and beneath watercourses.

Construing Grants and Conveyances

A number of cases dealing with rights to land adjoining watercourses have involved the question of whether a particular conveyance of land has transferred a riparian estate. In deciding such cases, the court has sought to determine whether the parties to the transfer intended a riparian estate to pass.[156] It was early (1819) stated that an intention to pass a riparian estate entitled to soil formed along a river bank (called "alluvion") could be manifested either by words in the deed expressly making the river a boundary of the estate or by the grantor transferring an estate such that no land susceptible of private ownership exists between the river and the transferred estate, even though the river is not made a boundary of the estate.[157]

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[155] (*Continued*)
parian land should be determined by considering the situation at the time of the attempted use. This meant that land not contiguous to a stream could be added to contiguous land and the entire tract would become riparian if contiguous and held in one common ownership. This legally could include land outside the watershed but use of water thereon would usually be considered unreasonable as a question of fact.

Such a view, in general, would more nearly accord with the literal wording of Art. 661, which reads: "He whose estate borders on running water, may use it as it runs, for the purposes of watering his estate . . ." etc.

Such questions apparently have not been decided in Louisiana. The Louisiana court has said that ascertaining whether land is riparian is a key question in determining whether it is subject to the public servitude imposed by L.S.A.—Civil Code, Art. 665 upon lands lying along navigable rivers for the making and repairing of levees, etc. Such servitude came into existence when the property was separated from the public domain. If the land does not actually front on the river it becomes necessary to trace the title to the original grant to ascertain whether it was then riparian. See, e.g., Bd. of Comm'rs, Pontchartrain Levee District v. Baron, 236 La. 846, 109 So. 2d. 441, 443-444, (1959); Delaune v. Bd. of Comm'rs, Pontchartrain Levee Dist., 230 La. 117, 87 So. 2d. 749, 754 (1956). The court apparently has not further spelled out its criteria for such purposes. It is problematical to what extent it might follow such criteria of riparian land for water-use purposes, but it need not necessarily follow it. See the reasoning employed and the emphasis on Art. 665's use of the word "adjacent," said not to require contact with the river, rather than "adjoining." In contrast, Art. 661 employs the words "he whose estate borders on running water" and "through whose estate water runs." It may be noted that in one early case the court noted that several early grants of land in Louisiana "were made with narrow fronts on the rivers and running back a great depth . . ." Bicknell v. Weindalh, 7 La. Ann. 291, 292 (1852). See also Zenor v. Parish of Concordia, 7 La. Ann. 150 (1852). But in a number of instances, different persons may now own the front and back portions of such tracts.

[156] The court has been interested mainly in determining whether the estate is riparian for purposes of deciding title to alluvion, there being no such case reported concerning rights to water.

[157] Morgan v. Livingston, 6 Mart. (O.S.) 19 (1819).

Because a conveyance which expressly designates a river as one boundary of the transferred land is quite clearly a conveyance of a riparian estate, few cases have been presented to the court for a decision as to whether a riparian estate has been transferred by express language. In 1819, the court held that an estate conveyed with a "front to the river" was a riparian estate because of the use of these words.[158] "Front on the river" also has been held sufficient to describe a riparian estate.[159] However, in other cases the court has held that "front to the river" would not necessarily indicate a riparian estate when other factors in the description indicated otherwise. The words "front to the levee" have likewise been held not necessarily to convey a riparian estate.[160]

One group of cases concerning rights to lands adjoining and underlying watercourses have involved meander lines. Meander lines are generally lines run in a survey of public lands to define the banks of certain bodies of water, generally but not necessarily navigable, and to determine the quantity of public land subject to patent or sale by the government.[161] The curving banks of a body of water are represented by a series of straight lines, as the surveyor moves from point to point along the bank. Depending upon the surveyor's skill, the distance between points along the bank, the degree to which the banks actually deviate from a straight line, and other such factors, the meander lines will more or less accurately represent the true shoreline. Often, however, the meander lines do not coincide exactly with the true shoreline.

A conflict arises in these cases when the state or Federal government, or one of its agencies, grants land to an individual, using a meander line as one of the stated boundaries. If the state or Federal government, or someone claiming under a patent therefrom, asserts title in land which might lie between the meander line and the actual shoreline because of the meander line's location, it must be determined whether the conveyance to the first party was intended to convey only to the meander line, or to the true shoreline. In other words, it must be determined whether a transfer of land with a meander line as a boundary actually transfers a riparian estate.

In a syllabus by the State Supreme Court added to a 1917 decision, the general rule was stated to be:

> The general rule is that meander lines are not run as boundaries of the land surveyed, but for the purposes of defining . . . the banks of the stream or other body of water and as a means of ascertaining

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158 Ibid.

159 La. Branche's Heirs v. Montegut, 47 La. Ann. 674, 17 So. 247 (1895).

160 Cochran v. Fort, 7 Mart. (N.S.) 622, 624, 625 (La. 1829); Cambre v. Kohn, 8 Mart. (N.S.) 572, 579, 580 (La. 1830); Livingston v. Heerman, 9 Mart. (O.S.) 656, 721 (La. 1821). In all of these cases land susceptible of private ownership existed between the actual boundary and the river, and the court held that the vendors retained title to this land, which was riparian.

161 Palmer Co. v. Wilkinson, 141 La. 874, 75 So. 806, 808 (1917), citing Horne v. Smith, 159 U.S. 40 (See p. 43) (1895) and another Federal case.

> the quantity of land embraced in the survey. The stream or other body of water, and not the meander line as actually run on the ground, is the boundary.[162]

The court has recognized an exception to this rule, however:

> . . . but this rule has been held to apply only where the distance between such meander line and the actual shoreline is comparatively small. It is not applied where . . . the real shoreline is distant from the supposed shoreline, and there is a large area of land between the supposed shoreline, as shown on the plat, and the actual shoreline.[163]

A meander-line boundary, then, generally signifies a riparian estate unless the meander line lies far back from the true shore.

On nonnavigable streams, another question could arise from the fact that the riparian owners, not the state, generally own the beds of the streams. L.S.A.—R.S. 9:2971 reads as follows:[164]

> It shall be conclusively presumed that any . . . conveyance . . . affecting land described as fronting on or bounded by a waterway . . . shall be held . . . to include all of the grantor's interest in and under such waterway . . . whatever that interest might be in the absence of any express provision therein particularly excluding the same therefrom; provided that where the grantor at the time of the transfer . . . holds as owner the title to the fee of the land situated on both sides thereof and makes a transfer or other grant affecting the land situated on only one side thereof, it shall be conclusively presumed, in the absence of any express provision therein particularly excluding the same therefrom, that the transfer . . . thereof shall include the grantor's interest to the center of such waterway . . .[165]

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[162] Palmer Co. v. Wilkinson, 141 La. 874, 75 So. 806 (1917).

The court indicated that the same general rule would apply to grants by either the state or Federal government of land adjoining watercourses. (75 So. at p. 808.) While this case involved primarily a state patent, the court applied the same general rule in two cases involving a Federal patent. Land v. Brockett, 162 La. 519, 110 So. 740 (1926); Thigpen v. Noonan, 162 La. 527, 110 So. 743 (1926). It would seem, however, that this would not necessarily result if a patent or deed clearly indicated an intention *not* to convey land beyond the meander line nor any riparian rights in the bed or waters of the watercourse.

[163] Acadia-Vermilion Rice Irrigating Co., Inc. v. Miller, 178 La. 954, 152 So. 576, 577 (1933). Accord: Bruning v. City of New Orleans, 165 La. 511, 115 So. 733, 737 (1928) regarding the effect of a deed; Land v. Brockett and Thigpen v. Noonan, supra; Smith v. Horne, supra, 159 U.S. 40, 42-43 (1895). Cf. Hall v. Board of Commr's, 111 La. 913, 35 So. 976 (1904) regarding a swampland grant.

Another possible exception arises where the meander lines signify a body of water that does not in fact exist. See Palmer Co. v. Wilkinson, supra, 75 So. at p. 808. Also see State v. Aucoin, 206 La. 786, 20 So. 2d. 136 (1944), regarding traverse lines run in regard to swampland grants by the United States.

For a discussion of various aspects of swampland grants, see 6 La. Bar Journal No. 1 (supra, note 116).

[164] This provision was added in 1956. La. Acts 1956, N. 555.

[165] See Nattin v. Glassel, 156 La. 423, 100 So. 609 (1924) discussed in note 43, supra, regarding the application of perhaps somewhat different rules prior to this

It should be noted that this statute creates a presumption that not only title to the bed of a stream is to pass with a transfer of riparian land, but all rights *in* the waterway are to pass also. It should be noted further, however, that it apparently is possible to reserve these rights by express language.

An important test for determining the intention of the parties appears to be that of noting whether everything susceptible of private ownership has been conveyed. Three objects that can intervene between the conveyed estate and the river are a levee, a public road, and alluvion. It is well established that neither a public road nor a levee will prevent an estate that would otherwise be on the river from being riparian.[166] The rule as to the effect of the intervention of alluvion between the conveyed estate and the river has been developed such that "if at the time of the sale of riparian land, the alluvion attached has attained a sufficient elevation above the waters to be susceptible of private ownership, the alluvion does not pass with the land, unless so expressed."[167] Conversely, if the alluvion is not sufficiently formed at the time of sale to be susceptible of private ownership, it passes to the purchaser.[168] Alluvion is susceptible of ownership when it rises above the ordinary low water stage of the river.[169] Questions regarding alluvion are discussed further below.

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165 (*Continued*)
legislation. The 1956 statute gave persons one year from August 1, 1956, to take action to protect prior rights that might be adversely affected, by bringing suit or by recording a notarized declaration asserting such rights in the conveyance records of the proper parish. L.S.A.—R.S. 9:2973. The statute also includes a proviso that its rules relative to the conveyance of land adjoining a waterway shall not affect any "then existing valid right of way upon, across or over said property so transferred or conveyed . . ."

166 Morgan v. Livingston, 6 Mart. (O.S.) 19, 251 (La. 1819); Municipality No. 2 v. Orleans Cotton Press, 18 La. 122, 239, 240, 36 Am. Dec. 624 (1841); Succession of Delachaise v. Maginnis, 44 La. Ann. 1051, 11 So. 715, 718 (1892). Also see note 177, infra, and note 108, supra.

167 Barre v. City of New Orleans, 22 La. Ann. 612, 613 (1870). See also Cochran v. Fort, 7 Mart. (N.S.) 622, 625 (1829); Ferriere v. City of New Orleans, 35 La. Ann. 209, 210 (1883). This rule does not override particular words in a deed which convey a riparian estate, however. To this point see La Branche's Heirs v. Montegut, 47 La. Ann. 674, 17 So. 247 (1895), where alluvion was formed at the time of a mortgage of land described in the mortgage as "a sugar plantation on the left bank of the Mississippi river, having a front of one-fourth of one arpent, more or less, on said river, by eighty arpents in depth." The purchaser under foreclosure got a riparian estate.

168 Meyers v. Mathis, 42 La. Ann. 471, 7 So. 605 (1890). It is not clear whether the right to future alluvion might be reserved by the grantor in a conveyance of riparian land. R.S. 9:2971, set forth later in the text of this section, implies that rights in the land beneath a waterway might be specifically reserved by the grantor; but in the *Delachaise* case cited in the text below, the court indicated that title to alluvion is incapable of existing apart from the riparian estate. This latter would seem to be the better view, for otherwise the conveyed riparian estate would cease to be on the river as alluvion formed to its front.

169 State v. Richardson, 140 La. 329, 72 So. 984, 991 (1916); Seibert v. Conservation Commission of Louisiana, 181 La. 237, 159 So. 375 (1935).

Shifting Shores and Channels

Several of the problems connected with the determination of ri parian land stem from the very nature of the rivers and streams ir Louisiana. The continued shifting of the shores of many rivers anc streams because of their soil-building and erosive propensities has beer a never-ending source of litigation to define the lands that border on o lie near rivers as riparian or nonriparian.

L.S.A.—Civil Code, Articles 509 to 518 deal specifically with the ef fects of changes in the location of soil, caused by actions of streams anc rivers. Article 509, probably the most important of these articles, de fines the accretion formed "successively and imperceptibly" to soil sit uated on the shore of a river or stream as *alluvion,* and gives this al luvion to the owner of the soil situated on the edge of the stream o river, whether or not it is navigable.[170]

Article 510 applies this same rule to dereliction formed by the rive or stream retiring imperceptibly from one of its shores. Conversely i denies to the owner of the shore upon which a river encroaches an claim to soil carried away.[171] But Article 511 allows the owner of soi which is carried away by a *"sudden irruption"* of a river or stream t claim the land that was washed away if it can be identified and i claimed within one year.[172]

Alluvion formed in front of the property of several riparian owner is to be divided according to the frontage of each owner at the time c formation of the alluvion.[173]

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[170] The court has indicated that this may apply even though the process forming accretions was initiated by the act of man, such as by the constructio of a cut-off channel across a bendway. It has said that the decision in such case should depend on principles of equity. Esso Standard Oil Co. v. Jones, 233 La. 91 98 So. 2d. 236, 241 (1957), cited supra, note 15. See also 32 Tulane Law Rev. 31 323 (1958).

Article 509 also provides, however, that the riparian owner ". . . is bound leave public that portion of the bank which is required by law for the publ use." See note 16, supra, for the complete article.

[171] L.S.A.—Civil Code, Art. 510: "The same rule applies to derelictions forme by running water retiring imperceptibly from one of its shores and encroachir on the other; the owner of the land, adjoining the shore which is left dry, has right to the dereliction, nor can the owner of the opposite shore, claim th land which he has lost."

"This right does not take place in case of derelictions of the sea."

Arts. 509 and 510 have been construed by the court in a number of cases. S L.S.A.—Civil Code, Arts. 509 and 510, Notes of Decisions.

[172] L.S.A.—Civil Code, Art. 511: "If the river or stream, whether navigable not, carries away by a sudden irruption a considerable tract of land from a adjoining field, which tract of land is susceptible of being identified, by carrying th same on a field lower down, or on the opposite shore, the owner of the tra of land thus carried away, may claim his property, provided he does it with a year, or even after the year has elapsed, if the person, to whose land the sc thus carried away has been united, has not yet taken possession of the same."

[173] L.S.A.—Civil Code, Art. 516: "If an alluvion be formed in front of t property of several riparian proprietors, the division is to be made accordi to the extent of the front line of each at the time of the formation of the alluvior

As for the rights in and to the use of the waters themselves, it is not clear what the effect of shifting shores or channels might be. It seems probable, however, that those estates that are considered riparian for purposes of determining rights in and to alluvion would also be considered riparian for purposes of determining the right to use water.

An excellent summary of the law applicable to title to alluvion is contained in the syllabus by the court in *Succession of Delachaise v. Maginnis*.[174] It reads as follows:

1. . . .
2. The principle underlying and usually determining the title to alluvion, in our system, is expressed in the equitable maxim, 'qui sentit onus, sentire debet et commodum! (He who bears the burden ought also to be entitled to the advantage.)[175]
3. Another principle, equally germinal, is that title to alluvion is a purely accessary right, attaching exclusively to the riparian estate, and incapable of existing without it.
4. A party who sells the entire estate owned by him up to the line of a public road or street bordering the river, and beyond which no property susceptible of private ownership exists at date of sale, retains no estate to which the accessary right to future alluvion could attach.
5. The intervention of a public road or street does not prevent the owner of the estate adjacent thereto from being considered as the front or riparious proprietor, when nothing susceptible of private ownership exists between the road or street and the river.
6. Such adjacent estate must bear the whole loss resulting from any encroachment by the river, furnishing space for a new road or street if the old is washed away;[176] and the law, as well as justice, awards him the corresponding benefit from accession.[177]
7. The vendor of the lots adjacent to the road is subject, on the other hand, to no risk of loss, and has, therefore, no legal or equitable claim to any future accretion.

Land cut off from the fields of an individual by a river or stream opening a new channel in such a way that the land becomes an island, remains his property, whether the watercourse is navigable or nonnavi-

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[174] 44 La. Ann. 1043, 11 So. 715 (1892).

[175] Authors' insertion in parentheses.

[176] See Ruch v. City of New Orleans, 43 La. Ann. 275, 9 So. 473 (1891).

[177] Apparently, it makes no difference whether the public road is entirely owned by the city or state, or merely a servitude with the ownership of the soil in the riparian owner. In both cases, the road will not prevent the estate from being riparian. See Municipality No. 2 v. Orleans Cotton Press, 18 La. 122, 237-244 (1841). L.S.A.—Civil Code, Article 658, provides that "the soil of public roads belongs to the owner of the land on which they are made, though the public has the use of them." (Authors' footnotes.)

gable.[178] Thus, islands formed by the river depositing soil are distinguished from those formed by a shift in the channel. Those formed by deposited soil generally belong to the state in navigable streams,[179] and those similarly formed in nonnavigable streams are divided among the riparian owners;[180] while those formed by the river shifting channels belong to whoever owned the land at the time of the channel shift.

It may be noted also that Article 518 provides:

> If a river or stream, whether navigable or not, opens itself a new bed by leaving its former channel, the owners of the soil newly occupied shall take, by way of indemnification, the former bed of the river, every one in proportion to the quantity of land he has lost.
>
> They shall again take their former property, if the river or stream returns to its former channel.

In the case of navigable streams, this article should not present many difficulties in its application, for in most instances, it would result only in what was formerly public land—the bed of a navigable stream (see *Navigable Rivers and Streams*, supra)—becoming private land in exchange for the formerly private land becoming public land; i.e., the state would become the owner of the newly formed bed of the navigable river, and the former owners would become owners of the old bed, which was originally the state's.[181]

The ownership of the beds of nonnavigable streams ordinarily is in the riparian owners.[182] Therefore, if the stream changes its course, the owner of the land newly covered by the stream might retain this land as a riparian owner, and might, at the same time, be granted the ownership of the original bed which was owned by the former riparian owner. However, another interpretation of the article might be that the land newly covered by the stream would become the property of the persons who formerly owned the old bed and not the property of the landowners adjacent to the new bed, as the article perhaps intends that its operation should result in an exchange of rights.

Another question involved in the nature of riparian estates is presented when a river completely erodes away a riparian estate such that an estate which formerly lay behind the original riparian estate becomes the new riparian estate. If the river then adds alluvion to

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[178] L.S.A.—Civil Code, Art. 517: "If a river or stream, whether navigable or not, by opening itself a new branch cuts off and surrounds the field of any individual owner of the shore, and makes it an island, the owner shall keep the property of his field."

[179] L.S.A.—Civil Code, Art. 512: "Islands and sandbars, which are formed in the beds of navigable rivers or streams, and which are not attached to the bank, belong to the state, if there be no adverse title or prescription."

[180] See L.S.A.—Civil Code, Arts. 513, 514 and 515, included in note 41, supra.

[181] Fitzsimmons v. Cassity, 172 So. 824, 829 (La. App., 1937). Article 453 of L.S.A.—Civil Code provides that "navigable rivers . . . and the beds of rivers, as long as the same are covered by water . . ." are "public things."

[182] See *Nature of Riparian Rights*, supra.

Who owns accretions formed by silt deposits along streams or bays?

this new estate, does the original estate reappear, or does the new riparian estate take title to the alluvion? Logic and the law would seem to indicate that the new riparian estate should gain title to the alluvion, but in the one case where such a situation seemed to be presented, the court held that the law applicable to submergence and reemergence applied, rather than the laws regarding alluvion and, therefore, the original riparian estate was recreated.[183] Although the court did not mention the Civil Code articles, it in effect applied the above-quoted Article 518 rather than Article 509. It would appear, however, that where the court cannot find Article 518 applicable, it would be compelled to hold that once a riparian estate is lost to the river, it is forever lost. This would be so because by Article 509 the owner of the land on the water's edge becomes the owner of the accretions added to the land.[184] Thus, as the estate which had been eroded into the river is replaced by new alluvial deposits, these new deposits would become part of the estate to which they are added. As the eroded estate reappeared, then, it would reappear as additions to the estate which lay on the water's edge at the time the accretions began to be formed; and even though the former riparian estate might be entirely replaced, it would be replaced as an addition to the estate which originally had not been on the banks of the river.

Pollution Control by Public

The rights of individuals to pollute watercourses[185] are affected by certain statutes designed to protect public rights to these watercourses.

Anyone who intentionally performs any act tending to contaminate any private or public water supply, when the act foreseeably endangers the life or health of human beings is to be fined not more than $1,000 or imprisoned for not more than 20 years, or both. If the act does not foreseeably endanger the life or health of human beings, the fine is not to exceed $500, nor the imprisonment 5 years.[186]

183 Hughes v. Birney's Heirs, 107 La. 664, 32 So. 30 (1902).

184 See text at note 170, supra.

185 See *Pollution*, supra.

186 L.S.A.–R.S. 14:58.

Oil and gas well operators receive particular attention under a statute which provides that no person is to discharge oil, salt water, or other noxious or poisonous substances or gases into any stream from which water is taken for irrigation purposes, and which would render it unfit for irrigation purposes or would destroy the fish therein,[187] except during an open season which extends from October 1 to December 31, inclusive, of each year. During the open season, these products may be released into the streams. A watchman must be provided by the well operators night and day during the rest of the year to prevent leaks, breaks, secret pipes, or violation of this law.

The statute does not apply, however, to the discharge of these waters into those portions of natural streams having a normal salt content of more than 110 grains per gallon or into the tributaries of such streams if the tributary joins the stream where it has such salt content. These streams are recognized as being unfit for irrigation. Nor does the statute apply to streams having their source outside Louisiana or to the tributaries of such streams.[188]

A fine of not less than $100 nor more than $2,000, or an imprisonment for not less than 30 days nor more than 3 months is provided for each violation. Each day that the provisions of the statute are violated constitutes a separate offense.

Two identical statutes provide that no person shall discharge into any of the waters of the state any substance that kills fish, or renders the water unfit for the maintenance of normal fish life characteristics, or in any way adversely affects the interests of the state. Fine and/or imprisonment is provided for violation.[189]

Perhaps the broadest powers of control over pollution are placed in a commission known as the Stream Control Commission.[190] The commission has control of waste disposal, public or private, by any person,[191] into any of the waters of the state[192] for the prevention of pollution tending to destroy fish or wildlife, or domestic animals, or to be injurious to the public health or welfare.[193] It may enter at all reasonable

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[187] See also *State Wildlife and Fisheries Commission,* infra, for other statutes dealing with the protection of fish.

[188] L.S.A.—R.S. 38:216. See State v. Hincy, 130 La. 620, 58 So. 411 (1912) in which a prior act (Act No. 163 of 1910) was held constitutional.

[189] L.S.A.—R.S. 56:322 and L.S.A.—R.S. 56:362. The former provision relates to the protection of sport fishing and the latter to commercial fishing.

[190] The Commission consists of the Commissioner of Wildlife and Fisheries, the President of the State Board of Health, the Commissioner of Conservation, the Commissioner of Agriculture and Immigration, the Executive Director of the Department of Commerce and Industry, and the Attorney General, or their authorized representatives. L.S.A.—R.S. 56:1431.

[191] L.S.A.—R.S. 56:1433: " 'Person' includes any municipality, industry, public or private, or co-partnership, firm, or any other entity."

[192] L.S.A.—R.S. 56:1433: " 'Waters of the state' includes rivers, streams, lakes, and all other water courses and waters within the confines of the state, and all bordering waters, including the Gulf of Mexico."

[193] L.S.A.—R.S. 56:1434.

times upon private or public property for the purpose of inspecting and investigating conditions relating to the pollution of any waters of the state.[194]

The powers and duties of the commission are defined as follows:

The commission:

(1) Shall establish such pollution standards for waters of the state in relation to the public use to which they are or may be put as it deems necessary;

(2) May ascertain and determine for record and for use in making its orders what volume of water actually flows in any stream, and the high and low water marks of waters of the state affected by the waste disposal or pollution of any person;

(3) May by order or regulation control, regulate, or restrain the discharge of any waste material or polluting substance discharged or sought to be discharged into any water of the state.

(4) May prohibit any discharge resulting in pollution which is unreasonable and against the public interest in view of the existing conditions in the waters of the state.[195]

The Commissioner of Wildlife and Fisheries is to enforce and administer the statutes relating to the commission and the rules, regulations, and orders of the commission through the agents and enforcement officers of the Commission of Wildlife and Fisheries.[196]

It is provided that no person is to discharge, or permit to be discharged, into any waters of the state any waste or pollution that tends to destroy fish or wild or domestic animals or fowls or to be injurious to the public health or welfare in violation of any rule, order, or regulation of the commission,[197] under penalty of fine and/or imprisonment.[198]

Administrative machinery is provided for the commission to carry out its functions. When in the opinion of the commission any person violates or is about to violate any of the above provisions, or fails to control the polluting content or waste discharged or to be discharged into any waters of the state, the commission may notify the alleged offender of such determination. The person must within 10 days from such notification file a full report showing what steps have been and are being taken to control the pollution. The commission may then make such orders as in its opinion are necessary. In an emergency that causes or threatens irreparable damage, or if the public interest requires it, the commission may issue a temporary order requiring the pollution to be stopped pending a hearing. "The temporary order shall

194 L.S.A.—R.S. 56:1438.
195 L.S.A.—R.S. 56:1439.
196 L.S.A.—R.S. 56:1437.
197 L.S.A.—R.S. 56:1440.
198 L.S.A.—R.S. 56:1444.

not be effective for more than five days beyond the date of the hearing and in no event for more than twenty days."[199]

Any person who feels aggrieved by any order or restriction of the commission may file a petition with the commission asking for a hearing of the matter involved. The commission must then fix the time and place of the hearing and notify the petitioner. Following the hearing, the final order of determination of the commission is conclusive. The order may be reviewed anew, however, in the District Court of East Baton Rouge upon petition. On such review, the decree of the court takes the place of the order of the commission.[200]

In 1947, the act creating the Stream Control Commission[201] was attacked as unconstitutional under the Fourteenth Amendment of the United States Constitution and under the Louisiana Constitution. In Texas Co. v. Montgomery,[202] the Texas Company brought a bill in equity before a Federal District Court against the Commissioner of Wildlife and Fisheries, seeking a preliminary injunction. The court held the act to meet the test of due process and not to conflict with the prohibitions of the State Constitution cited by petitioner which were in issue before the court.[203] The court mentioned, however, that there might be merit in the petitioner's contention that the act violates the State Constitution in that it vests power in the commission to declare what conduct shall constitute a misdemeanor, a power that can be exercised only by the Legislature,[204] but as no criminal action under the act was before the court, it did not decide this point.[205]

Another statute dealing with pollution of streams provides that:

> No person shall knowingly and wilfully empty or drain or permit to be emptied or drained from any pump, reservoir, well, or oil field into any natural stream of the state any oil, salt water, or noxious or poisonous gases or substances in quantities sufficient to destroy the fish therein.[206]

This statute is followed immediately by the following provision:

> The commissioner of wildlife and fisheries shall supervise all drainage of salt water and other noxious substances into the natural streams of the state. Any owner or operator or oil producing property or oil tanks or reservoirs discharging salt water or any other noxious substances into the natural streams of this state in quantities sufficient to kill the fish therein shall, when notified by the commissioner of wildlife and fisheries, immediately im-

199 L.S.A.—R.S. 56:1441.

200 L.S.A.—R.S. 56:1442.

201 L.S.A.—Acts 1940, No. 367. This act is now embodied in L.S.A.—R.S. 56:1431 et. seq.

202 73 F. Supp. 527 (1947); affirmed 332 U.S. 827 (1947).

203 Texas Co. v. Montgomery, 73 F. Supp. 527, 536 (1947).

204 Id. at 535.

205 Id. at 536.

206 L.S.A.—R.S. 56:1451.

pound such substances. Substances so impounded may be released by permission of the commissioner of wildlife and fisheries.[207]

Violation of these two statutes calls for fine or imprisonment.[208] Apparently, they are supplementary to L.S.A.—R.S. 38:216 (discussed above[209]), which also regulates pollution of streams by oil-well operators. R.S. 38:216 seems to be designed primarily for the protection of irrigation, and its restrictions are applicable only to pollution of streams used for irrigation having their sources within Louisiana. The two statutes quoted above appear to be applicable to pollution of any natural streams, but are limited to pollution affecting fish life, other pollution not being within their scope.

The State Commissioner of Conservation, who administers oil and gas conservation laws, has authority to make reasonable regulations and orders, after notice of hearing, to prevent the pollution of fresh water supplies by oil, gas, or salt water; and conversely to prevent or regulate the intrusion of water into oil or gas strata.[210]

Diffused Surface Waters

A law dictionary defines "surface waters" as waters which "diffuse themselves over the surface of the ground, following no defined course or channel, and not gathering into or forming any more definite body of water than a mere bog or marsh."[211]

There is only one reported case[212] in Louisiana which discusses the right of a person possessing lands to use the diffused surface waters that lie on his land. In this case the Second Circuit Court of Appeal of Louisiana, which was faced with a situation in which an owner of an upper estate had constructed terraces on his land such that waters were diverted away from a natural drain onto the lower owner's land at a point other than that at which they naturally would enter, said that:

> The action of defendant in constructing the terrace was certainly within itself a lawful act, and for the purpose of improving his property, and rendering it better adapted for agriculture; and even conceding that Article 661 of the Civil Code is applicable to surface waters which fall upon the land from the clouds, it must be construed with the preceding article[213] and with the rule of construction which has been universally followed by the Supreme Court of this state in its application of the law to cases where one of the owners of contiguous estates has constructed works for improving and cultivating his land.

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207 L.S.A.—R.S. 56:1452.

208 L.S.A.—R.S. 56:1453.

209 See text at note 187, supra.

210 L.S.A.—R.S. 30.4 (c).

211 See definition of "Surface Waters," *Black's Law Dictionary*, Fourth Edition, p. 1762.

212 Chandler v. Scogin, 5 La. App. 484 (1926).

213 See Articles 660 and 661 in Appendix, infra.

> The universal rule in this state has been to construe the law so as to reconcile it with the interests of agriculture . . .; and where the work is done for the improvement of the property for agricultural purposes, we cannot conceive of its being ordered destroyed unless the person demanding its destruction shows that it will injure his property.
>
> The provisions of Article 661 of the Civil Code do not vest in the proprietor of an estate or in the estate through which a stream flows any right in the bed of the stream which is not a part of the estate nor in the water which falls upon other estates which may finally reach and become a part of the stream . . .; and if defendant chooses, he may prevent the water from coming into the drain . . ., and plaintiff could not have any case of complaint unless he shows injury . . .

Although the court denied that the lower owner had any rights in the diffused surface waters appearing on the lands of the upper owner, and that the upper owner might prevent the water from entering the drain, it implied that there would be a cause of action if the lower owner could show injury. It was contended that the diversion of the water into another drain caused flooding of lower lands, but the court refuted this. What other types of injury might furnish a basis for a cause of action was not made clear. It is problematical whether a lower owner would be entitled to a certain portion of the diffused surface waters from the upper owner's lands for purposes, for example, of irrigation, if he could show that his crops were being injured by the deprivation of the waters. At any rate, the court made it clear that the lower owner was not entitled as a matter of right to any of the water in the absence of injury. Furthermore, this case did not actually involve the withholding of surface waters, but, rather, the diversion of water away from a drain so that the water reached the lower estate at a point other than the one it would normally have reached. Thus it was essentially a drainage rather than a "right to use" case. In view of this it is probable that the decision should not be given a great deal of weight regarding rights of use.[214]

It will be recalled that the State Supreme Court has indicated for particular purposes that streams that only flow during rainy seasons or that do not have well-defined banks may nevertheless be considered natural watercourses. In one case, however, a body of water lying in a swamp forming a part of a so-called shallow lake that conveyed water

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[214] It may be noted that this case was decided not by the State Supreme Court but by a Court of Appeal. Under the 1921 Constitution, the Supreme Court is the highest court and has been the court of last resort in the state in this and many other kinds of civil suits when more than $2,000 is involved. However, under a constitutional amendment approved by the voters in 1958, decisions of the intermediate courts of appeal (increased from 3 to 4) apparently now will generally be unappealable in most cases (see La. Const. of 1921, Art. 7, secs. 10, 20, and 29 as amended by S. B. Bill 128, 1958), although the Supreme Court may still decide questions of law on the request of any court of appeal (Const. 1921, Art. 7, sec. 25).

sometimes one way and sometimes another and depended for its existence on rainwater or overflow from streams, was considered a mere slough, not a stream.[215] It is problematical whether the courts might treat certain shallow bodies of water, although not classed as nor connected with a stream, as shallow lakes or bayous to which riparian rights might attach.[216] It would seem that, to be so treated, they would need at least to have poorly defined banks.

Although there is little authority as to the right of an upper owner to prevent diffused surface waters from reaching the lower estate, there is a great deal of law concerning his right to dispel such waters from his estate. The basic Civil Code provision (Article 660) relating to this subject reads as follows:

> It is a servitude due by the estate situated below to receive the waters which run naturally from the estate situated above, provided the industry of man has not been used to create that servitude.
>
> The proprietor below is not at liberty to raise any dam, or to make any other work, to prevent this running of the water.
>
> The proprietor above can do nothing whereby the natural servitude due by the estate below may be rendered more burdensome.

The last paragraph of this provision determines the rights of the upper estate owner in regard to drainage of surface waters from his lands. Taken literally, this paragraph might be interpreted to mean that the waters must be left to drain at their own speed and in their own course, without being speeded up or rechanneled by the upper landowner. It is clear, however, that generally the court will construe the paragraph liberally in favor of the upper owner,[217] so that a certain amount of drainage works necessary to the proper cultivation and to the agricultural development of his estate may be constructed. In determining the amount of drainage construction to be allowed, the court has stated the following rules to be applicable:

> The owner of the superior estate may make all drainage works which are necessary to the proper cultivation and to the agricultural development of his estate. To that end, he may cut ditches and canals by which the waters running on his estate may be concentrated, and their flow increased beyond the slow process by which they would ultimately reach the same destination.
>
> But the owner of the superior estate cannot improve his lands to the injury of his neighbor, and thus he will not be allowed to cut ditches or canals, or do other drainage works by which the waters running on his lands will be diverted from their natural flow, and concentrated so as to flow on the lower lands of the

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[215] See *Natural Watercourses, Definition,* supra.

[216] See *Natural Lakes and Bayous,* infra.

[217] Guesnard v. Bird's Ex'rs., 33 La. Ann. 796 (1881); Chandler v. City of Shreveport, 169 La. 52, 124 So. 143 (1929); State ex rel. Wood v. Pinder 41 So. 2d. 479, 485 (La. App. 1949).

> adjacent estate at a point which would not be their natural destination, thus increasing the volume of water which would by natural flow run over or reach any portion of the lower adjacent estate, or to drain over his neighbor's lands stagnant waters from his, and to thus render the servitude due by the estate below more burdensome.[218]

In practice, it may be difficult to determine in a particular fact situation whether a particular drainage is or is not allowable.[219]

With respect to the application of the above-quoted Civil Code Article 660 to the obstruction of drainage by a lower landowner, the court in 1852 said that every low place in a field which might drain rainwater from above was not to be considered as a "natural drain." even though it might run through adjacent estates.[220] The court said that, in the best interests of agriculture:

> When the low places in a field are not too deep to be drained by the system of draining now in general use, they become a part of the field, and cease to be natural drains.

It noted further that:

> There are, no doubt, cases in which the drainage . . . is interrupted by bayous and deep coulees, which the proprietor of the lower estate is bound to keep open . . .

Nevertheless, in a later case in which the court enjoined the obstruction of natural drainage by a lower owner, held to be in violation of Article 660 of the Code, this drainage consisted of no more than the scattered flow of rainfall water across lower land having only a few inches less elevation.[221]

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[218] Ludeling v. Stubbs, 34 La. Ann. 935, 937 (1882). In an earlier case, the court noted that early grants of land in Louisiana were made with the condition "that the land should be cultivated . . ." This, the court said, implied "the right to drain them to the rear . . ." which was the natural direction of drainage, ". . . by means of ditches . . ." — but the right should be exercised so as to cause no unnecessary injury to others. Becknell v. Weindhal, 7 La. Ann. 291, 292 (1852).

[219] On the question of the possibility of increasing the burden of the natural servitude of drainage by the drainage of irrigation water from irrigated land, see Broussard v. Cormier, 154 La. 877, 98 So. 403, 405 (1923); Cornett v. Herbert, 31 So. 2d. 446, 448-449 (La. App., 1947). The 1950 Census reported that 219,219 acres or more than 1/3, of the irrigated land in the state was artificially drained. 1950 U.S. Census of Agriculture, Vol. III, Irrigation of Agricultural Lands, Part 8, Louisiana, State Table 2.

[220] Becknell v. Weindhal, supra, 7 La. Ann. 291, 292-293 (1852).

[221] Both the upper and lower landowners were rice irrigators. Broussard v. Cormier, 154 La. 877, 98 So. 403 (1923). See also Louisiana Irrigation and Mill Co. v. Sixth Ward Drainage Dist., 158 La. 701, 104 So. 623 (1925), which is in general accord. It may be noted that in the early Becknell case, supra, the court's decision appears to have been influenced by the provision of an alternate drain and the plaintiff's long acquiescence in the lower owner's cultivation of the alleged natural drain.

Ground Waters

The authors have been unable to discover any reported cases in Louisiana dealing with rights to waters lying beneath the surface of the earth. The Louisiana Civil Code provisions that would appear to be most applicable to such rights are the following:[222]

> Article 491. Perfect ownership gives the right to use, to enjoy and to dispose of one's property in the most unlimited manner, provided it is not used in any way prohibited by laws or ordinances.
>
> Article 505. The ownership of the soil carries with it the ownership of all that is directly above and under it.
>
> The owner may make upon it all the plantations, and erect all the buildings which he thinks proper, under the exceptions established in the title: *Of Servitudes.*
>
> He may construct below the soil all manner of works, dipping as deep as he deems convenient, and draw from them all the benefits which may accrue, under such modification as may result from the laws and regulations concerning mines and the laws and regulations of the police.
>
> Article 666. The law imposes upon the proprietors various obligations towards one another, independent of all agreements; and those are the obligations which are prescribed in the following articles.
>
> Article 667. Although a proprietor may do with his estate whatever he please, still he cannot make any work on it, which may deprive his neighbor of the liberty of enjoying his own, or which may be the cause of any damage to him.
>
> Article 668. Although one be not at liberty to make any work by which his neighbor's buildings may be damaged, yet every one has the liberty of doing on his own ground whatsoever he pleases, although it should occasion some inconveniences to his neighbor.
>
> Article 2315. Every act whatever of man that causes damage to another, obliges him by whose fault it happened to repair it. . . .

Although none of these articles has been interpreted in any case concerning rights to waters, they have been discussed in what are perhaps analogous cases concerning rights attaching to underground gas and oil. In Higgins Oil and Fuel Co. v. Guaranty Oil Co. (1919)[223] the plaintiff had sunk an oil well on his land,[224] and was drawing oil therefrom by means of a pump when defendant sank a well on its land approximately 400 feet from plaintiff's well. The defendant's well proved to be a nonproducer and was abandoned, but by some means of underground communication it let air into the area affected by the plaintiff's pump, consequently reducing the production markedly.

[222] Although Griffin v. Mares, 54 So. 2d. 838 (La. App., 2d. Cir.) 1951 dealt with the construction of an agreement for joint use of a water well. The court held that the plaintiff had not been prevented from making use of his one-half interest in the well which was located on or along the property line between adjoining properties.

This well in Evangeline Parish pumps ground water for irrigation purposes

The plaintiff sought to have the defendant plug the open well to stop the flow of air. But the trial court held that the plaintiff had no cause of action, and the plaintiff appealed.

The Supreme Court noted in its reported decision that "subterranean or percolating waters" presented an analogous situation, and stated that "In the civil law the right to drain off by means of a deeper well the subterranean water of the neighbor is well settled . . ."[225] The court suggested that this would be so at least so long as there were no injury to the surface of a neighbor's land, such as drying it up. It also suggested that it would make no difference whether the withdrawal of water were accomplished by means of a pump or by relying on the natural flow or percolation of the water.[226]

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[223] 145 La. 233, 82 So. 206, 5 A.L.R. 411 (1919).

[224] Apparently neither plaintiff nor defendant actually owned the tracts upon which they sank their wells, but merely held oil leases.

[225] 82 So. at 211. See also Ohio Oil Co. v. Ferguson, 213 La. 183, 34 So. 2d. 746, 750 (1947). For a discussion of the view that caution should be exercised in drawing such analogies between water and oil or gas because of differences in their nature or use, see Summers, W. L., *The Law of Oil and Gas*, Vol. 1A, Sec. 62 (1954). In any event, it should be borne in mind that the withdrawal of oil and gas, unlike water, has been made subject to considerable regulation by a state agency since 1940. See L.S.A.—R.S. 30.1 et. seq. This may include the establishment of drilling units and pooling arrangements.

[226] 82 So. at 211, citing New York and Mississippi cases. The court has not defined percolating groundwaters, but they would seem, in general, to constitute such waters as seep or percolate through the ground and are not shown to be confined in any definite underground watercourse.

The court went on, however, to discuss the effect of the above-quoted Code articles on the case at hand, which involved oil wells. It reasoned as follows:

> This last article[227] can be but of little assistance in the case, for it applies only to a person who is at fault, or, in other words, who has committed, or is committing a wrong; and the question in the case is whether the defendant is 'at fault.'
>
> The provision of Article 667, that the owner may not make any work on his property 'which may be the cause of any damage to' his neighbor is found under the title of 'Of Servitudes,' and hence apparently is one of the exceptions to which Article 505 refers, and hence would seem to be a limitation upon Article 505.
>
> It is also apparently in direct conflict with the provision of Article 491 that 'ownership gives the right to enjoy and dispose of one's property in the most unlimited manner.' The line of demarcation between what an owner may do with impunity and what he may not do without incurring liability is drawn by Article 668 between what is a mere inconvenience and what causes a real damage. But this cannot be the meaning; for very evidently an owner cannot be debarred from the legitimate use of his property simply because it may cause a real damage to his neighbor. It would be contrary to the fundamental legal principle according to which the exercise of a right cannot constitute a fault or wrong, and besides, every damage is real; an unreal damage cannot be a damage.[228]

Thus, the mere fact that the plaintiff had been injured in this case did not necessarily give it a cause of action against defendant; for, as defendant had a right to make works upon his own land, the exercise of that right could not constitute a fault or a wrong. After review of the French authorities on this subject, however, the court concluded that such cases as this should not be decided by any inflexible rule, but should be guided by two general principles: (1) that the owner must not injure *seriously* any right of his neighbor, and (2) even in the *absence* of any right on the part of the neighbor, he must not in an unneighborly spirit do that which while of no benefit to himself causes damage to the neighbor.[229] It is on this latter point that the court apparently decided the case in favor of the plaintiff. As defendant was obtaining no utility from the well and was injuring plaintiff, the court held that plaintiff had shown a cause of action.[230]

In two cases involving waste of gas (a gas well had "blown out"), the court has said that adjoining landowners would not be able to complain of the depletion of the portion of the gas reservoir lying beneath their lands, if the depletion had been caused by the depleter's taking

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[227] L.S.A.—Civil Code, Art. 2315. (Authors' footnote.)

[228] Higgins Oil and Fuel Co. v. Guaranty Oil Co., 145 La. 233, 82 So. 206, 207, 5 A.L.R. 411 (1919).

[229] Id. at 82 So. 211

[230] Id. at 82 So. 212

the gas for a useful purpose.[231] (But in a later case, the court quotec approvingly its prior reference in the above-discussed Higgins Oil anc Fuel Co. case to a U. S. Supreme Court case in which the owner o one of the tracts of land overlying an oil and gas basin "was restrainec from wasting the gas, even though his doing so was for the—to him— useful purpose of lifting the oil to the surface."[232])

If the gas is being wasted, as in the two cases involved, the adjoining owners can obtain an injunction to prevent the waste, but still canno obtain money damages unless negligence or willful wastage can be shown.[233]

The court has sometimes referred to the "coequal" or "correlative" rights of the owners of lands overlying oil and gas fields, and has made the statement that:

> The rights of the several owners of the gas field are coequal; one owner cannot exercise his own right so as to preclude his neighbor from exercising his, or so as to interfere with the neighbor.[234]

But the court also has referred to the ability of one to withdraw an undue proportion to the detriment of the others, in the absence of regulatory legislation.[235] (Legislation relating to oil and gas wells is embodied in L.S.A.—R.S. 30:1, et seq.)

It should again be emphasized that none of these cases involved water or water rights, and that if the court were faced squarely with a case concerning percolating ground waters, it might depart from the language of the above cases. Nevertheless, in view of the court's employment of an analogy to ground water in the Higgins oil case, discussed above, the court might also analogize in the opposite direction and apply principles in percolating ground water cases similar to those which it applies to oil and gas cases.

There would appear to be no way of determining at present whether a distinction may be made between different forms of ground waters and the rights connected to them. It is possible that different

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231 Louisiana Gas and Fuel Co. v. White Bros., 157 La. 487, 143, So. 383, 85 A.L.R. 1147 (1932).

232 Hunter Co. v. McHugh, 202 La. 97, 11 So. 2d. 495, 505 (1942).

233 McCoy v. Arkansas Natural Gas, 175 La. 487, 143 So. 383; 184 La. 101. 165 So. 632 (1936); 191 La. 332, 185 So. 274 (1938); 4 A.L.R. 2d. 205-206.

234 Higgins Oil and Fuel Co. v. Guaranty Oil Co., supra, at 82 So. 212; Hunter Co. v. McHugh, 202 La. 97, 11 So. 2d. 495, 502, 505 (1942).

235 Hunter Co. v. McHugh, supra, at 11 So. 2d. 502 and 503.

In a recent Federal case involving a Louisiana situation, the court held (citing Louisiana cases) that "there is no legal duty or obligation on the part of land owners to refrain from engaging in the lawful production of gas from their own lands, notwithstanding the fact that such production may cause drainage from sands underlying adjoining lands." Billeaud Planters v. Union Oil Co. of California, 245 F. 2d. 14, 19 (1957).

In any event, the Louisiana court has held that the drilling of a well on one's own land which descends at an angle so as to reach beneath another's land constitutes a trespass and is not permissible. Gliptis v. Fifteen Oil Co., 204 La. 896, 16 So. 2d. 471, 474 (1943).

rights may attach to waters considered to be percolating ground waters in contrast to underground streams, or underground waters flowing in conjunction with a natural above-ground stream. In other states where such questions have arisen, the appellate courts have usually held or said that the underground streams and underflows of surface watercourses are governed by about the same rules of law that apply to surface watercourses, but that all groundwaters will be presumed to be percolating waters rather than in an underground stream unless some evidence to the contrary is presented to the court.[236] Perhaps this distinction will be made also in Louisiana, but there is no indication from the court as yet that it will be made.

Natural Lakes and Bayous

Rights regarding the use of the waters of natural lakes and bayous appear to be unsettled.

There are no reported Louisiana Supreme Court decisions specifically concerned with rights to use waters from natural lakes and bayous. In 1925, however, the Second Circuit Court of Appeal of Louisiana decided a case concerning rights to the waters of a bayou which the court felt was probably not a running stream.[237] The bayou was not navigable: it was about 2,000 feet long and 100 feet wide. The plaintiff owned land on one side of this bayou, and sought an injunction to prevent the defendant from taking water from the bayou for purposes of irrigating his lands, which drained into but did not adjoin the bayou. The defendant was taking the water under a contract entered into with the person who owned the land between his land and the bayou, on the opposite side of the bayou from the plaintiff. The contract purported to authorize him to pump the water and convey it across the intervening land.

The trial court granted the injunction. But the Court of Appeal reversed this judgment on the grounds that plaintiff did not show that he would be damaged by the taking of water, in that he did not show how much water would be pumped, nor that plaintiff desired the water other than for fishing and to maintain the market value of his land, nor that defendant's pumping of water would kill any fish or have any appreciable effect on the bayou except in extremely dry seasons. Under the general rule of law that an injunction would not be issued unless actual or impending damages are shown, the injunction was denied. The court added: "However, plaintiff's right to renew the action, should necessity for it arise, should be reserved." But the court did not otherwise discuss how the body of water should be classified, nor did it discuss what difference it would make if the bayou had been a running stream, nor any question of riparian rights or use of water on nonriparian land.

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[236] 55 A.L.R. 1386, 109 A.L.R. 415.

[237] Jackson v. Walton, 2 La. App. 53 (1925), 55 A.L.R. 887. Also see earlier discussions of this case under *Natural Watercourses: Definition*, and *Nonriparian Use*.

It is possible that not a great deal of weight should be put on th case since (1) it was never clearly established that the bayou was no a stream, and (2) the only rules of law expressed by the court were thos pertaining to injunctions rather than water rights as such.[238] But th case does support the proposition that a riparian owner cannot enjoi the taking of water from a nonnavigable, nonflowing body of water b a nonriparian landowner under a contract with a riparian owner, wher no actual or impending damage is shown. It is doubtful whether th holding should be extended beyond this to include any broader state ment of riparian rights.[239]

L.S.A.—R.S. 9:1101 declares the waters of all bayous, lagoons, lake and bays not under the direct ownership of any person on August 1 1910, to be the property of the state.[240] Unlike the waters in rivers an streams, which always have been insusceptible of private ownership ur der Article 450 of the Civil Code relating to running water,[241] it woul appear that there is no Code restriction that would have made th waters in lakes and bayous (other than such as might be classed a "running water") insusceptible of private ownership. The implicatio of the statute is, in fact, to the contrary—that such waters may be pr vately owned. If they are susceptible of private ownership, it seem possible that Article 505 of the Code would place this ownership of th water in the person owning the soil beneath the waters.[242]

The ownership of the beds of all navigable lakes was vested in th state on its admission into the United States in 1812.[243] By the terms c the 1921 Constitution, the state cannot now transfer title to the beds c navigable waters except for reclamation purposes,[244] but prior to 192 there was no such restraint. In the 1954 case of California Co. v. Price,[24 the court held that any beds of navigable lakes or bays could have bee transferred by the Legislature to private individuals prior to 1921, an that, under a prescriptive statute of 1912,[246] the state could not attac those transfers in the 1954 case even though the public policy of th state is probably contrary to such transfers.[247]

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238 Also recall earlier discussion in note 214 about this being a decision of lower appellate court, not the Supreme Court.

239 It would seem that for riparian rights to attach to a shallow nonflowing bayo or lake it would need to have at least poorly defined banks, as discussed earlier und *Diffused Surface Waters.*

240 See Appendix, infra.

241 See Appendix, infra.

242 See text at notes 53 and 54, supra.

243 California Co. v. Price, 225 La. 706, 74 So. 2d. 1, 2 (1954). But see qualificatic in note 109, supra. The State Supreme Court has indicated that the state's ownersh of the bed of a navigable lake generally extends to the high-water mark. Roy, Inc. Bd. of Comm'rs, Pontchartrain Levee District, 237 La. 541, 111 So. 2d, 765, 768, (195

244 L.S.A.—Const. of 1921, Art. 4, Sec. 2. See text at note 105, supra.

245 225 La. 760, 74 So. 2d. 1 (1954).

246 L.S.A.—R.S. 9:5661. See note 106, supra.

247 California Co. v. Price, 225 La. 706, 74 So. 2d. 1, 11-14 (1954).

There was little discussion by the court in this case regarding what effect private ownership of the bed might have on the right to use the overlying waters. It did recognize that the ownership of beds would be subject to the superior rights of the government and the public to the "unhampered use of the water above them for navigation, commerce, fishing and the like."[248] What "and the like" might mean is difficult to determine.

A strong dissenting opinion (the case was decided by a 4 to 3 vote) deals with the problem created by considering the effect of L.S.A.—Civil Code, Article 505, which states that "The ownership of the soil carries with it the ownership of all that is directly above or under it," on the granting of private ownership of the bed.[249] The dissent maintains that Article 505 gives complete ownership of the waters to the owner of the bed, and that if the bed is placed in private ownership the state can have no legal claim to the use of the waters.[250]

It may well be, however, that waters in navigable lakes may be held to be insusceptible of private ownership despite the lack of any codal provision declaring this to be the case, as has been held with respect to underground oil and gas.[251] The question of rights to reduce the water to possession, and what effect the ownership of the bed might have on this right, might then be involved.

The following questions then are left undecided:

1. Are the waters of navigable lakes susceptible of private ownership?
2. If they are, does their ownership accompany ownership of the beds?
3. If so, what rights in the waters are reserved to the state and the public?
4. If the waters of lakes are insusceptible of private ownership, does ownership of the beds provide the right to reduce the waters to possession?
5. If there is such a right to reduce to possession, is it subject to other rights of other individuals, or the state and public?
6. In any case, what are the rights of a shore owner as opposed to a bed owner, where the owners are different individuals?

As can be seen, despite the court's holding that the beds of navigable lakes are susceptible of private ownership, very little has been clearly decided as to the rights to the water itself.[252]

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[248] Id. at 74 So. 2d. 11.

[249] Id. at 74 So. 2d. 23-24. This problem was not directly dealt with by the majority opinion.

[250] Id. at 74 So. 2d. 24.

[251] See *Ground Waters*, supra.

[252] See Doiron v. O'Bryan, note 130, supra, where riparian rights in a navigable lake were discussed. But the case dealt only with the question of ownership of formerly submerged land adjoining the lake. See also Haynes v. Smith, discussed in note 308, infra.

It appears to be unquestioned that the beds of nonnavigable lakes are susceptible of private ownership.[253] (Whether a particular riparian owner owns any part of the bed depends on the circumstances.[254]) It is not clear, however, whether ownership of the bed carries with it the rights to exclusive use of the water of the lake or bayou. It would seem likely that if one person owns all the land surrounding a nonnavigable lake, which is not connected with any other body of water, and also owns its bed, he would be entitled to an exclusive use of its waters,[255] but many problems might arise where ownership of surrounding lands and the beds are in more than one person. Perhaps some form of apportionment with respect to the withdrawal of water would be in order in a situation in which two or more owners hold different lands adjoining a lake, but it is difficult to guess how a conflict between a person owning the shore of a lake and another person owning the bed might be resolved. On the one hand, Article 505 perhaps places ownership and control of the waters in the owner of the bed,[256] but on the other, the court has indicated that the owner of land on the shore of a lake has "riparian rights."[257] Also difficult to determine is the effect of ownership of beds and banks on the rights to use the water for fishing, hunting, etc.[258]

Some lakes or bayous may be considered a part of or connected with a flowing stream or river. Such lakes or bayous have been discussed earlier.[259] In one case, the court noted that:

> Bayous not only serve to supply estates with water, but they also serve as channels through which estates are drained, and they may in particular cases be 'floatable streams,' which serve as highways for the transportation of logs and other property. As natural drains, or 'floating streams,' many persons may be interested in them, so

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253 See California Co. v. Price, 225 La. 706, 74 So. 2d. 1, 10 (1954); State v. Sweet Lake Land and Oil Co., 164 La. 240, 113 So. 833 (1927); Realty Operators v. State Mineral Board, 202 La. 398, 12 So. 2d. 198 (1942); McDade v. Caplis, 154 La. 1019, 98 So. 625 (1923), 112 A.L.R. 1120.

254 In the McDade case, supra, at 98 So. 626, the court indicated that a grant of land bordering on a nonnavigable lake did not include title to any of its bed, even though all the surrounding land was eventually acquired through such grants. But the Sweet Lake Land case, supra, suggests that a grant of land *entirely* surrounding a nonnavigable lake may include title to its bed without mentioning it. Here the state in three separate grants, but on the *same* day, had granted all the land surrounding the lake. See 113 So. 834 and 839.

See also State v. Aucoin, 206 La. 786, 20 So. 2d. 136 (1944) regarding shallow lakes whose beds were granted to the state as "overflowed land" in swampland grants by Congress.

If a nonnavigable bayou is considered a flowing stream, the grant of adjoining land ordinarily carries title to the bed. See Begnaud v. Grub and Hawkins, supra, note 39.

255 See Realty Operators v. State Mineral Board, 202 La. 398, 12 So. 2d. 198 (1942).

256 See text at notes 53 and 54, supra.

257 Doiron v. O'Bryan, 218 La. 1069, 51 So. 2d. 628 (1951). See notes 130 and 252, supra.

258 See note 66, supra, which has some bearing on this question.

259 See particularly *Nature of Riparian Rights*: *Right to Use Water*; and *Natural Watercourses*: *Definition*.

that no one person can say as to a particular stream that there is united in him all the elements of perfect ownership. . . .[260]

Artificial Watercourses

It would appear that, under authority of various articles of the Civil Code,[261] an individual may construct entirely on his own land any canal, ditch, or other artificial watercourse which he may choose to make. But his rights connected with such works are less clear when such artificial watercourse connects with a natural body of water or otherwise affects the property or rights of other persons.

In 1885, a case arose concerning the rights of contiguous landowners on a canal to use the water flowing in the canal.[262] The plaintiff in the case had conveyed an undivided third interest in a sugar estate to the defendant, the conveyed estate being contiguous to plaintiff's estate. The conveyance contained a clause giving the plaintiff the right to get water from a lake or swamp in the front of defendant's estate and conduct it through defendant's estate back to plaintiff's estate. Another clause extended this right to plaintiff's estate itself, rather than merely to plaintiff personally, and described the canal which was to be used for transportation of the water. It further provided that the plaintiff's estate was to keep the canal free and open at all times, such that no damage to defendant's estate should occur from transportation of the water, and that defendant's estate should not obstruct the flow of the canal except for self-protection.

Plaintiff complained that defendant had placed two dams across the canal, was drawing off water from the canal, and was about to pollute the canal with sugarhouse skimmings. He sought to enjoin these actions.

The court in upholding the district judge's decision in favor of the plaintiff noted that a *predial servitude*[263] had been created by the contract and that the parties' rights in the canal waters were to be governed not only by the contract but also by the Civil Code provisions dealing with servitudes. As the contract specifically provided that the defendant could place no obstruction in the canal to prevent the water from running freely, it would seem that the dams placed in the canal by the defendant could have been ordered removed under authority of the contract itself. The court, however, went further and cited Articles 655, 660, 661, and 777 of the Code (since the parties had created a

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[260] Palmer v. Wilkinson, 141 La. 874, 75 So. 806, 810 (1917). For further discussion of this case, see note 52 and *Navigable Watercourses: Definition*, supra.

[261] See particularly Articles 491, 505, 667 and 668, quoted under *Ground Waters*, supra.

[262] Shaffer v. State National Bank, 37 La. Ann. 242 (1885). Another case, in 1959, involved the construction of a right-of-way agreement regarding the construction and use of a canal for the irrigation of rice. Kingery v. Reeves, 113 So. 2d. 64 (La. app., 1st ct.) 1959).

[263] That is, a servitude due one estate by the other, rather than a mere *personal* servitude between the parties.

predial servitude) "which are to the effect that the owner of the estate which owes the servitude, can do nothing tending to diminish its use or to make it more inconvenient."[264]

It stated that:

> The law on this subject has been judicially expounded by this court in a number of cases, particularly in that of Ludeling v Stubbs,[265] [Authors' footnote] in which, after a review of the jurisprudence, it was declared that dams illegally obstructing a flow of water to the prejudice of one of the contiguous proprietors or owners, was a nuisance, which the law would order to be abated.[266]

After citing nine other Louisiana cases to this point,[267] the court continued:

> In the present case, it is therefore clear that the dams complained of and which arrested the water, were illegal obstructions, and that the plaintiff cannot be required to endure them, *unless for a time in cases of unavoidable necessity*, of which there is no evidence in the present controversy. (Emphasis added.)

It would appear that the court felt that in certain circumstances obstruction of the flow would be allowed.

As to the diversion of water from the canal, the court held that an unjustified withdrawal would not be allowed. It expressly provided however, that the defendant might use the water in a cross ditch on his estate for supplying his sugarhouse, cultivating and developing his estate, and for any other purposes; provided he did not thereby *unnecessarily* divert the flow of the canal, or cause any permanent injury to the plaintiff which might *seriously* impair his right to draw water through defendant's land citing Article 661.[268] Apparently this would set up some form of a reasonable use test in determining the relative rights in and to the waters of the canal.

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[264] Shaffer v. State National Bank, 37 La. Ann. 242, 248 (1885).

L.S.A.—Civil Code, Art. 777; "The owner of the estate which owes the servitude can do nothing tending to diminish its use, or to make it more inconvenient."

"Thus he cannot change the condition of the premises, nor transfer the exercise of the servitude to a place different from that on which it was assigned in the first instance . . ."

L.S.A.—Civil Code, Art. 655: "One of the characteristics of a servitude is, that it does not oblige the owner of the estate subject to it to do anything, but to abstain from doing a particular thing, or to permit a certain thing to be done on his estate."

Articles 660 and 661 are included in Appendix, infra.

[265] 34 La. Ann. 935 (1881).

[266] 37 La. Ann. at 248, 249. It would appear that the court has somewhat expanded the actual holding in Ludeling v. Stubbs, which dealt solely with the right of an upper owner to cut ditches on his lands and thus divert surface waters onto the lower owner's lands in a manner in which they would not naturally flow, and of the right of *lower owner* to obstruct by dam the drainage of the *upper estate*. There was no mention of the right of an upper estate owner to obstruct the flow that would reach the lower estate.

[267] As in Ludeling v. Stubbs, supra, none of the cited cases were directly in point.

[268] Shaffer v. State National Bank, 37 La. Ann. 242, 248 (1885).

The threatened pollution of the water by defendant was not enjoined by the court under the Code nor under the express provisions of the contract, but rather by inference from the contract, on the reasoning that to allow pollution would be destructive of the privilege granted plaintiff to draw water for useful purposes.[269]

This case would seem to indicate that the servitude provisions of the Civil Code are applicable to artificial watercourses where the parties contract expressly or impliedly for this to occur. In effect, the court treated the canal as a natural watercourse, at least as between the two estates involved. It is probable, however, that because of the existence of the contract between the parties, the case should be limited to its particular facts as authority.

Navigation canals may be constructed on one's own lands, and a toll charged for their use even without a franchise from the Legislature.[270] Domestic corporations organized for the purpose of building navigation canals have the power of expropriation for rights of way for such canals,[271] if the corporations file with the Louisiana Secretary of State a resolution agreeing to be public utilities,[272] and the estimated cost of construction exceeds $3,000,000.[273] They are also given right of way over public lands.[274] The Commissioner of Wildlife and Fisheries is authorized to acquire by lease, purchase, or expropriation any canals situated in the coastal parishes useful to the seafood industry, and to operate them so that they are open to free navigation by all vessels.[275]

The construction, improvement, and maintenance of navigation canals, and the acquiring of property for such purposes, including the acquiring of adjoining property for industrial development (but no part of which shall be more than one-half mile from the center of such canals) are declared to be works of public improvement, the titles to which are to vest in the public and for public purposes.[276]

The municipalities, as well as the parishes, are authorized to acquire property for carrying out the above-mentioned public purpose, by expropriation, if necessary. This authority exists in the case of municipalities whether the works are within or without their corporate limits.[277]

Under the state Constitution, the Legislature is empowered to create navigation districts as political subdivisions of the state for the purpose

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269 Id. at 249.

270 Harvey v. Potter, 19 La. Ann. 264, 92 Am Dec. 532 (1867). Ilhenny v. Broussard, 135 So. 669, 172 La. 895 (1931).

271 L.S.A.—R.S. 45:64.

272 L.S.A.—R.S. 45:70.

273 L.S.A.—R.S. 45:71.

274 L.S.A.—R.S. 45:66; L.S.A.—R.S. 34:346.

275 L.S.A.—R.S. 34:341.

276 L.S.A.—R.S. 34:361. Just how this provision can be reconciled with the court holdings that navigation canals can be privately owned and operated (supra) is difficult to determine. Perhaps this provision is merely an authorization for public ownership, rather than a mandate.

277 L.S.A.—R.S. 34:362.

of obtaining, improving, and maintaining navigation on rivers an streams.[278] Pursuant to this, the Legislature has created a few such di tricts.[279]

Any canal or other artificial waterway constructed by a levee di trict, which is navigable in fact and connects with any other navigabl waters, may be dedicated and declared by the governing authority c the levee district with the approval of the Department of Public Work and concurrence of the United States district engineer, as a waterwa subject to free and unrestricted navigation by the public.[280]

Prescription

It would appear that a riparian owner's right to use running wate granted by L.S.A.—Civil Code, Article 661[281] cannot be terminated b nonusage or failure to exercise the servitude, for the Code explicit states that:

> Prescription for nonusage does not take place against natural c necessary servitudes, which originate from the situation of places.[2]

The servitude created by Article 661 appears to be such a servitude.

Although a riparian owner apparently cannot lose his rights to wat given under Article 661 through nonusage, there is the possibility that h may lose these rights through other means, such as adverse use, implie acquiescence, or a conflicting acquired servitude.

The court has given some slight indication that the natural serv tude of drainage due the upper estate by the lower, by virtue of Articl 660 of the Code, might be lost under certain circumstances. In a cas in which the lower owner had filled in a shallow depression in his fiel such that waters from the upper estate could not use this depression a a means of escape from the upper estate, the court indicated that on of its reasons for refusing to compel the lower owner to remove th obstruction was that the obstruction had been made openly and i the presence of the upper owner without complaint from the uppe owner. This implied acquiescence in the existence of the works over period of years amounted to a waiver of his right to complain.[283]

As the right of natural drainage is a natural servitude arising fro the situation of places, it would seem that the above-quoted Code pr vision forbidding prescription against such servitudes might not b applicable when there is a waiver of a servitude. It should be note

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[278] L.S.A.—Const. of 1921, Art. 14, § 30.3 (1921).

[279] L.S.A.—R.S. 34:401 et. seq.

[280] L.S.A.—R.S. 38:291.

[281] The article begins: "He whose estate borders on running water may use it it runs . . ." See Appendix, infra, for complete article.

[282] L.S.A.—Civil Code, Art. 795. In contrast, conventional servitudes may be e tinguished by nonusage during 10 years. See L.S.A.—Civil Code, Art. 789, and cas noted thereunder.

[283] Becknell v. Weindhal, 7 La. Ann. 291 (1852).

however, that the court placed a great deal of emphasis on the interests of agriculture in this case, and could have decided it solely on the grounds that Article 660 of the Code calls for a liberal construction in the interests of agriculture[284] That is, it is possible that the upper owner had never had a right to that particular drainage under Article 660, and thus had no right which he could waive.

Although the riparian right to use water apparently cannot be lost by nonuse, it is not clear whether it might not be *acquired* by a continuous and apparent use for a period of 10 years.[285] L.S.A.—Civil Code, Article 765 provides that "continuous and apparent servitudes may be acquired by title, or by a possession of ten years."[286] It would seem that something of a conflict might arise in applying the two servitude articles.

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[284] The lower owner in this case had provided an alternative drain, so that apparently the upper owner's ability to cultivate his fields was not greatly affected. Thus, on balance, the total benefit to agriculture was probably maximized by allowing the drain to be closed.

[285] No cases were found that dealt with the acquisition of a servitude to use water when it could be said that the use was continuous and apparent. L.S.A.—Civil Code, Article 727 defines continuous servitudes as "those whose use is or may be continual without the act of man." Aqueducts, drains, and views are cited as examples. Discontinuous servitudes are defined as "such as need the act of man to be exercised." Rights of drawing water, passage, and pasture are cited as examples. Article 724 states that "The conducting of water or aqueduct is the right by which one conducts water from his estate through the land of his neighbor by means of an aqueduct or ditch." Article 720 states that "The right of drawing water is a servitude by which one suffers his neighbor to draw water from the well or spring he has on his land . . ." The right is generally limited to the use of those living in his neighbor's house. From the foregoing general distinction drawn between continuous and discontinuous servitudes, however, it seems probable that any ditches, canals, *or other structures or devices* that would *not* require "an act of man" for their operation, which are physically apparent and continuous, and which serve to bring water upon one's estate could create through prescription a servitude that would entitle the recipient estate to their continued enjoyment. But in a number of cases, a servitude created through prescription, such as to convey water through a ditch across another person's land, may not include any rights to use the source of the water. In any event, it is problematical whether rights to use a natural watercourse could be acquired through prescription so as to impair the natural servitude of riparian landowners under Article 661, as indicated above.

The pertinent Code articles appear to be derived from French and Spanish sources. *Project of the Civil Code of 1825, 1 Louisiana Legal Archives* 78 (1937); 15 La. Law Rev. 777, 779 (1955). ". . . An aqueduct conveying water from a fountain which rose in another's field . . ." was recognized as an example of a servitude that could be acquired by prescription in Spanish law. Las Siete Partidas 3.31.15; *The Laws of Las Sieta Partidas* 416 (Moreau-Lislet & Carlton Translation 1820). In one early case, the Supreme Court indicated that the use of a neighbor's well was not a continuous servitude but it did not describe the nature of such use. Durel v. Boisblanc, 1 La. Ann. 407 (1846). A lower appellate court, in a case involving a sewer line, indicated that continuous servitudes do not require unceasing operation. Fuller v. Washingon, 19 So. 2d. 730, 731 (La. App., 1944).

For a more complete discussion of the subject of acquisition of servitudes by prescription, see 15 La. Law Rev. 777 (1955).

[286] It should be noted, however, that L.S.A.—Civil Code, Article 3504 provides that "A continuous apparent servitude is acquired by possession and the enjoyment

If, for instance, an upper riparian owner were to divert water by means of a canal for a period longer than 10 years he might possibly acquire a servitude under Article 765. But a lower owner apparently cannot be deprived of his servitude to use water given by Article 661 because of nonusage. The question may well be raised as to whether the lower owner has lost his rights of use, to the extent that they are infringed, not by nonusage, but by allowing the upper owner to establish his servitude. In the absence of decided cases it is difficult to predict whether this approach would be followed.[287]

Incidentally, it may be noted that L.S.A.—R.S. 9:1251, enacted in 1958, provides that if any landowner "expressly or tacitly" allows the public or certain persons to pass through or across his land solely for their convenient access to waters for boating or to any recreational site, they shall **not** thereby acquire a servitude or right of passage (nor shall it thereby become a public road or street by reason of a governing authority's maintaining or otherwise performing work thereon). However, this shall not prevent "land owners from entering into enforceable contracts specifically granting" such a servitude,[288] nor the specific dedication of roads or passages to public use, nor does it "repeal any laws creating servitudes along rivers, streams or other waters."[289]

Contrariwise, another statute provides:

> When private property is *damaged* for *public* purposes any and all actions for such damages are prescribed by the prescription of two years, which shall begin to run when the damages are sustained. (Emphasis added.)[290]

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[286] (*Continued*)
of the right for thirty years uninterruptedly, even without a title or good faith." Art. 765 has been interpreted to mean that 10 years' prescription will suffice to acquire a continuous, apparent servitude if good faith is present. Kennedy v. Succession of McCollam, 34 La. Ann. 568, 574 (1882). For a discussion of the case and the problems it dealt with, see 15 La. Law Rev. 777, 790, et seq. (1955). See also Randazzo v. Lucas, 106 So. 2d. 490 (La. App., 1958).

[287] In Sample v. Whitaker, 171 La. 949, 132 So. 511 (1930), the court held that a discontinuous mineral servitude in another's land, to drill for and remove minerals therefrom, may be extinguished, under particular circumstances, when the ownership of the land is acquired through prescription by the "holder of an apparently valid title for the whole property, in good faith, remaining in undisturbed possession of the land . . ."—although, under the circumstances, the minority of some of the owners of the servitude might suspend the operation of a statute providing for the loss of such a servitude through nonuse. However, the relevance of such a case to the question at hand is problematical.

[288] See note 145, supra, indicating that such enforceable contracts may be created by acts sufficient to transfer title.

[289] Nor does it repeal laws regarding expropriation of servitudes or authorizing the legislature or governing authorities to open, lay out, or appoint public roads or streets.

[290] L.S.A.—R.S. 9:5624. It has been held that this statute doesn't apply when property is taken, *but not damaged*, for public purposes. A. K. Roy, Inc. v. Bd. of Comm'rs, Pontchartrain, 237 La. 541 111 So. 2d. 765, 767 (1959). Also see discussion in this case of R.S. 9:5626 relating to appropriated lands used or destroyed for levees or levee drainage purposes. See also note 106, supra.

1958 Declaration of State Policy Regarding Surface Waters

In 1958, the State Legislature enacted an act which declared a policy of the state in regard to surface waters including the following:

1. The ownership and control of development and use of surface waters for all beneficial purposes are within the jurisdiction of the State which . . . may establish measures to effectuate the proper and comprehensive utilization and protection of such waters.
2. The constantly increasing needs of the people of the State for water requires that the surface water resources within the State be put to beneficial uses to the extent of which they are most reasonably capable and the waste and unreasonable use of surface waters should be prevented, and conservation of such waters should be accomplished to the fullest extent which is reasonably possible.
3. The public welfare and interest of the people of the State require the proper conservation, development, use, and protection of the inseparable land and water resources.[291]

In the same act, the Legislature provided for a temporary water resources study commission to study needed revisions in the water policy of the state and to develop recommended implementing legislation for the next regular session. (But the commission had not been activated as of April 1, 1959, and no appropriations had been made available for that purpose.) It noted that a careful, comprehensive study of surface water resources and related problems should be made by the state before enacting any additional water resources legislation, and added that:

> Nothing in this Act shall impair or interfere with the continuance of any existing valid rights to the use of surface waters, or to interefere with the customary use of water for domestic purposes.

In using the term "surface waters," the Legislature apparently was primarily concerned with waters in rivers, streams, and other bodies of water on the earth's surface.

State and Local Agencies or Organizations

Following is a description of some of the functions of various state and local agencies or organizations that have responsibilities and related powers concerning water resources.

It was noted in a recent report that:

> Including overhead and general expenses of the various state departments involved, the State is spending over $8,500,000.00 on

[291] La. Acts 1958, No. 363.

The State Department of Public Works is empowered to plan, construct, operate, and maintain dams, spillways, reservoirs, canals, locks, levees, drainage and irrigation systems, and other public works.

> construction, improvement and maintenance of various water installations for the biennium 1955-56. In addition to this, $3,840,000.00 has been allotted to the various parishes for drainage and road purposes.[292]

This report states also that large sums are being spent by special drainage, levee, and other districts, and by parishes, municipalities, and industry.

State Department of Public Works

This department is empowered to plan, construct, operate, and maintain "levees, canals, dams, locks, spillways, reservoirs, drainage systems, irrigation systems—inland navigation projects, flood control and river improvement programs—and other public works."[293] It may provide (and charge the reasonable cost of) engineering, economic, and other advisory services to local governmental subdivisions and special districts. It is also specifically authorized to plan systems of inland waterways and water

[292] *Water Problems in the Southeastern States,* Research Report No. 5, Louisiana Legislative Council, April 7, 1955. Quotation is from summary. Also see pp. 42-44 of Dec. 1957 revision of this report (Research Study No. 11) regarding 1956 and 1957 appropriations by the state for various programs.

[293] L.S.A.—R.S. 38:1 et. seq.

conservation projects, to "foster the maintenance, improvement, and extension of the Intracoastal Canal System and its feeders and initiate, sponsor, and carry through to completion all waterway projects which will further develop and expand the water resources of Louisiana . . .," subject to the jurisdiction of the United States.[294] The department is required to confer with the State Wildlife and Fisheries Commission in the planning of projects affecting wetlands and other wildlife habitat—whether they are "joint state-federal, state-parish or state or parish projects."

In order to perform its functions relating to the planning and designing of various hydraulic projects relating to drainage, irrigation, and water conservation, the department collects and interprets basic data to appraise the state's water resources. Since 1942, the department has increased annually the amount of money allocated to its program of extensively collecting and publishing water-resources data collected in cooperation with the United States Geological Survey. Streamflow, water quality, and other surface and ground-water data are collected under this cooperative program. The State Geological Survey (discussed later) also contributes funds to this program for the collection of ground water data.

In addition to its general operating budget, the department from time to time, by special legislation, has been granted appropriations of state funds to expend for particular purposes. Frequently, this has been done to enable the department to assist with projects of local districts, such as by making surveys, developing plans, or constructing necessary dams or other facilities. Examples of such assistance are included later.[295]

State Stream Control Commission

This commission exercises regulatory powers to control pollution, as discussed earlier under *Pollution Control by Public.* It will be recalled that the commission consists of the Commissioner of Wildlife and Fisheries, the President of the State Board of Health, the Commissioner of Conservation, the Commissioner of Agriculture and Immigration, the Executive Director of the Department of Commerce and Industry, and the Attorney General, or their authorized representatives.[296]

State Board of Health

This board has jurisdiction over water supplies and waste disposal within the state for the protection of health. It is authorized and directed to adopt a sanitary code that will include regulations regarding

[294] It may be noted that to promote the development of navigation, the Legislature has also created various navigation districts, harbor and terminal districts, and port commissions or authorities. See L.S.A.—R.S. 34:1 et seq.

[295] See, for example, *Bayou D'Arbonne Lake Watershed District,* and *Fish and Game Preserves,* infra.

[296] L.S.A.—R.S. 56:1431 et. seq. See L.S.A.—R.S. 33:3881 et. seq with respect to sewerage districts and sewerage systems.

these matters.[297] The regulatory powers granted to the Stream Contro Commission do not deprive the Board of Health of its jurisdiction i regard to matters that directly affect the public health.[298]

State Wildlife and Fisheries Commission

Some of the relevant functions of this commission are discussed late under the heading *Fish and Game Preserves.* The commission admin isters various laws relating to the protection, propagation, and taking o fish and game.[299]

Two identical statutes deal with the protection of fish. L.S.A.—R.S 56:321 and R.S. 56:361 provide that any person taking water from an of the fresh waters of the state for any purpose shall provide suitabl screens on intake pipes in order to prevent fish being removed fron the streams and destroyed or pumped out upon the land. The requirin and approval of such screens is under the judisdiction of the Wildlif and Fisheries Commission.[300] R.S. 56:321 is meant to apply to th protection of sport fishing, and R.S. 56:361 applies to the protection o commercial fishing.

The commission also exercises certain functions relative to the con trol of pollution, discussed earlier under the heading *Pollution Contro by Public.*

State Geological Survey

The Geological Survey, Department of Conservation, is empowere to make a geological survey of the entire state, and it may cooperat with others in doing so.[301] It has published a number of reports o surface and ground water resources. It is currently cooperating wit the State Department of Public Works and the U.S. Geological Surve in making investigations of water resources and uses in Louisiana.[302]

Police Juries

These are the governing bodies of the several parishes in the stat (which are comparable to counties in other states). These juries ar authorized, among other things, to:

(1) Regulate the construction and repair of dams and levees;

(2) Close and dam small canals or streams of water in the paris that are not under the jurisdiction of the United States Gov

297 L.S.A.—R.S. 38:11.

298 L.S.A.—R.S. 56:1437.

299 L.S.A.—R.S. 56:1 et. seq., and Const. of 1921, Art. 6, sec. 1 (A) (1921).

300 If, on inspection, a technician determines that a screen over an intake pip is needed, the matter is taken up with those making the diversion, by the Commis sion's Division of Water Pollution Control, whose principal function is aquatic bio logical and chemical research. (Based on information supplied by Mr. K. E. Biglane Chief of the Division.)

301 See L.S.A.—R.S. 30:201 et seq.

302 See particularly their cooperative report entitled *Water: A Special Report t the Louisiana Legislature,* published by the Department of Public Works in 1956.

ernment and are found to be harmful to property or public health. However, the approval of the Department of Public Works (or any levee district in which the dam is located) must first be obtained and a public hearing held;

(3) Regulate the clearing of the banks of rivers and natural drains to secure free passage for boats, logs and timber;

(4) Build dams to prevent salt water from the Gulf of Mexico and connected waters from entering into fresh-water streams;

(5) Construct and maintain drainage ditches and canals, to open drains, and perform related functions, and to cooperate in any related state or federal program.[303]

In 1954, the Legislature specifically authorized the Police Jury of East Carroll Parish "to regulate the height and use of the waters of Lake Providence . . ."[304] The Police Jury of Vernon Parish is cooperating in a joint project with the State Department of Public Works and the Anacoco-Prairie State Game and Fish Preserve to impound a fresh water supply. (See *Fish and Game Preserves,* infra.)

Municipalities

Incorporated municipalities (cities, towns, and villages) have a variety of powers regarding water resources or water supply. Some have been included in the special legislative charters of those that have been created by this method. Other powers are included in general or other special legislation applicable to all or certain municipalities.

Examples of such powers include powers to operate water works and acquire necessary property rights for such purposes by purchase or expropriation.[305] Municipalities, as well as parishes, also may engage in such works of public improvement as the deepening and improvement of watercourses or construction of canals for navigation purposes and the acquiring of adjoining property for industrial development.[306] One or more municipalities, parishes, or special districts may by agreement jointly exercise a number of powers that they hold individually.[307]

The court in a 1941 case stated that the police powers of municipalities generally may not be exercised outside their limits even though they have acquired property outside. It said the Legislature may grant such powers by special acts but they are to be strictly construed. In this case the city of Shreveport had been granted regulatory powers regard-

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303 L.S.A.—R.S. 33:1236 to 33:1238.

304 Acts 1954, No. 514.

305 See, e.g., L.S.A.—R.S. 33:361; 33:841.

306 See L.S.A.—R.S. 34:361 and 34:362.

307 Provided such agreements (1) do not affect designated types of private or semi-private activities, including water systems and flood control and drainage projects, and (2) do not constitute a donation of public funds or services of one municipality, parish, or special district for the benefit of another. L.S.A.—R.S. 33:1321 et. seq.

ing, and ownership of the bed of, a navigable lake outside its limits to provide an unpolluted city water supply.[308]

Irrigation Companies

The Louisiana Constitution of 1921 provides that:

"Corporations formed or to be formed . . . for the purpose of constructing and operating gravity canals for irrigation and navigation . . . shall have the right under such regulations as shall be prescribed by the Department of Public Works to utilize for such purpose the waters of the navigable streams . . . which may be the property of the state; . . ."[309] The term "corporation" includes "all joint stock companies or associations having any power or privilege not possessed by individuals or partnerships."[310]

It might be noted that L.S.A.—R.S. 9:1101 provides that no one is to be charged for the use of state waters.[311] As irrigation companies undoubtedly do charge persons who use the water they supply, it would seem that either the statute has been abrogated as to this provision or the companies are charging only for their services, not for the water.

The Legislature has provided that corporations formed to construct and operate canals for irrigation by gravity have power to acquire all land needed for rights of way and reservoirs either by negotiation with the owners of the land or by expropriation. The power of expropriation may not be used, however, within a township or section having a canal

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[308] By virtue of acts enacted in 1910, 1920, and 1926. (The regulatory powers also encompassed the area around the lake for a distance of 5,000 feet.) The court held that the city's ordinance prohibiting the operation of motor boats without mufflers on the lake was *ultra vires* and unenforceable because it had no relation to the city's regulatory power to prevent pollution of the lake waters. City of Shreveport v. Case, 198 La. 702, 4 So. 2d. 801 (1941). See City of Shreveport v. Wilkinson, 182 La. 783, 162 So. 621 (1935), regarding the validity of an ordinance prohibiting boating on the lake at night. In a case decided by the Court of Appeals, 2nd Circuit, the city's Commissioner of Public Utilities had authorized the defendant, a riparian owner, to build a boat house and pier on the lake for a commercial fish camp, but other riparians (who used the lake for their private boating and/or residential purposes) sought to enjoin its construction and use. The injunction was denied. (The court noted that the city had not adopted any regulations governing the construction of boat houses, piers, etc., nor had the defendant's property been zoned or made subject to any private restrictive convenants.) Haynes v. Smith, 85 So. 2d. 326 (1956).

Recall that the 1958 Uniform Pleasure Boating Act now prohibits the regulation of pleasure boating by local political subdivisions. See text at note 144, supra. Municipal corporations were called political subdivisions of the State in State v. Maitreiean, 193 La. 824, 192 So. 361 (1939).

[309] L.S.A.—Const. of 1921, Art. 13, § 6. (This provision also applies to hydroelectric power companies.) Such corporations are also granted "the right to use as reservoirs . . . the deserted beds of former navigable streams which may be the property of the State . . ." It is provided, however, that the property and plants of companies utilizing this authority shall become state property after 70 years from the completion of their canal systems or plants, "to be operated by it for public revenue in such manner as the Legislature shall direct . . ."—except for canals in existence before January 21, 1921.

[310] L.S.A.—Const. of 1921, Art. 13, sec. 8.

[311] See *Nature of Riparian Rights, Ownership of Water*, supra.

already in actual use unless consent is obtained from the owners of such canal.[312] The Legislature has further provided that not only may the waters of navigable streams be utilized by companies operating under this legislation but that "other waters of the State" may be so used, under regulations prescribed by the Department of Public Works "for the purpose of preventing unnecessary injury to private or public property."[313]

These provisions were embodied in Acts 1920, No. 43 which further provided that any such corporations formed after the act became effective were to be deemed public service corporations. Corporations in existence before the passage of the act do not fall within its provisions.[314]

An act passed 4 years prior to the 1920 act was similar and apparently is still in effect.[315] The major differences in the two acts appear to be that the earlier act:

1. Applies to corporations organized to build and operate not only irrigation canals, but also commercial navigation and hydroelectric canals;[316]
2. Does not explicitly grant to the corporations the right to utilize the waters of the state;[317]
3. Restricts the width of the right of way for the construction and laying out of canals to 600 feet;[318]
4. Requires that the corporations file with the Secretary of State a resolution agreeing that the corporations shall be public utilities before they can exercise the right of expropriation.[319]

There are a number of companies that furnish irrigation water in the state, particularly in southern Louisiana. In some instances, disputes regarding their undertakings to supply irrigation water to individual farmers have reached the Louisiana Supreme Court. But in none of the reported cases were rights to the source of the water used in dispute. In one case, however, the court noted that irrigation companies' rights of supplying irrigation water are subject to the condition that if "they should abuse their right to pump water from the public streams adjacent to their land, or to the land of those whom they contracted to supply water . . . to the prejudice of the rights of other individuals or corporations or of the state, the law would afford the injured party an adequate remedy."[320]

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312 L.S.A.—R.S. 45:61.

313 L.S.A.—R.S. 45:62. It is not clear here whether "other waters of the state" refers to state-owned waters, or to all waters within the state.

314 L.S.A.—R.S. 45:63.

315 Acts 1916, No. 268. This is now L.S.A.—R.S. 45:64—45:71.

316 L.S.A.—R.S. 45:64.

317 L.S.A.—R.S. 45:64—45:71.

318 L.S.A.—R.S. 45:66.

319 L.S.A.—R.S. 45:70.

320 State v. Riverside Irr. Co., 142 La. 10, 76 So. 216, 218 (1917).

In a case in 1907 the court ruled that, under the terms of a contract by a certain company to furnish water to a rice irrigator, the company could be held liable for failing to supply the water when properly requested to do so—except for a deficiency in supply of water at its source and certain other exceptions. But the company was held not to be liable because the irrigator had not given it a 10-day written notice that he wanted the water, as required by the contract.[321]

In an earlier case, the court held that under the terms of its contract a certain company was not liable for damages by failing to furnish irrigation water, when the failure was due to the inadequacy of rain that supplied a bayou. Conversely, as the farmers suffered almost a total loss of their crops, they were not held liable for the stipulated rent.[322]

Irrigation Districts

The State Legislature is granted the power by the Louisiana Constitution to authorize the police juries of the various parishes to create irrigation districts, which may be composed of territory either wholly within a parish, or partly within two or more parishes, and to authorize them within limitations, to incur debt and issue negotiable bonds to construct irrigation works.[323]

In pursuance of this constitutional authorization, the Legislature has enacted laws allowing irrigation districts to be formed.[324] Under these laws, the lands comprising one or more parishes or any portion or portions of one or more parishes may be formed into an irrigation district.[325] All land that cannot receive any benefit from operation of an irrigation district shall be excluded at the time the district is created.[326] The police juries do not initiate the action that creates a district, but they must create a district when petitioned to do so by the owners of a majority of the acres of land within the limits of the proposed district, outside corporate limits of incorporated towns and cities.[327] If the proposed district is composed of lands situated in more than one

[321] Mathieu v. N. American Land & Timber Co., 119 La. 896, 44 So. 721 (1907). For other cases construing contracts of various companies to furnish irrigation water see cases cited in Louisiana Digest, Waters, sec. 254, et. seq.

[322] Landers v. Garland Canal Co., 52 La. Ann. 1465, 27 So. 727 (1900).

It may be noted that legislation provides for a lien on irrigated crops to secure the agreed payment for the irrigation water supplied by another. L.S.A.—R.S. 9:4521. (See also 9:4521.) Cases construing this statute include Ferre Canal Co. v. Burgin, 106 La. 309, 30 So. 863 (1901), and Haas v. Ardoin, 145 So. 388 (La. App., 1933).

[323] L.S.A.—Const. of 1921, Art. 14, § 14 (d). The constitution limits the amount of debt which the Legislature can authorize the districts to incur to 10 percent of the assessed value of the taxable property within the district, except that an acreage tax, or forced contribution, not exceeding 50 cents an acre for a period not exceeding 40 years may be imposed by the district to support a bond issue not within this 10 percent limitation. L.S.A.—Const. Art. 14, § 14 (f) (1921).

[324] Acts 1938, No. 415; L.S.A.—R.S. 38:2101—38:2123.

[325] L.S.A.—R.S. 38:2101 (B).

[326] L.S.A.—R.S. 38:2101 (C). (Added by Acts 1956, No. 462.) No criteria are provided for determining whether land will receive benefit, however.

[327] L.S.A.—R.S. 38:2102.

parish, the petition must be signed by the owners of a majority of the acres of land in each parish within the proposed district, and presented to the police jury of the parish having the largest number of acres in the proposed district.[328]

All irrigation districts are governed by a board of commissioners made up of five commissioners.[329] They are selected by the landowners of the district, and serve for a term of four years.[330]

Irrigation districts have broad powers and authority. They may conserve the fresh water supply of the state for the benefit of the inhabitants of the districts to provide water for irrigation and other uses, both within and outside their boundaries. They are corporations with all the powers and rights of a political subdivision of the state for the purposes of issuing bonds and incurring debt. They may sue and be sued, incur contract obligations, and perform any acts necessary and proper for the carrying out of the purposes and objects for which they were created. This includes the power to expropriate property.

The districts may acquire by any means necessary the properties needed for their suitable operation and may dispose of any properties owned to any body organized under the laws of the United States. They may contract and enter into agreements with the United States, or any person, firm, corporation, or political subdivision of the state. They may delegate to any body organized under the laws of the United States all powers conferred upon them by the state, to the fullest extent allowed by law. Also, they may coordinate their activities with state and federal flood-control works and navigation projects.[331]

Such districts may issue and sell revenue bonds for the purpose of constructing, acquiring, or improving an irrigation system and may furnish and supply water for this purpose. An irrigation district may acquire water from any other irrigation system, or from any other source, and distribute the water. It may "make a uniform rate for, and collect a charge for water" distributed to the users. This charge shall be in addition to any tax levied to pay on any bonds which are issued. No part of the money realized from the sale of bonds voted to construct irrigation systems, canals, or ditches shall be used to pay for waters so purchased.[332]

Any irrigation district may, when petitioned to do so by the owners of a majority of the acres of land in the district (outside of incorporated towns and cities), levy an acreage tax not exceeding 10 cents an acre

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[328] Id. There would appear to be no limitation as to the minimum size of the district or the number of irrigators required, except for the provision that there must be five commissioners residing within the district. See footnote 198, supra.

[329] L.S.A.—R.S. 38:2107. Each must be a qualified elector of Louisiana, reside within the district, and own lands in the district of an assessed value of $2,000, or represent a corporation owning lands of this value within the district.

[330] L.S.A.—R.S. 38:2102; L.S.A.—R.S. 38:2108.

[331] See also note 139, supra, regarding an applicable 1958 constitutional amendment.

[332] L.S.A.—R.S. 38:2112.

for a period not exceeding 40 years, for the purpose of maintaining and operating the district.[333] All lands within the district (outside of incorporated towns and cities) shall be taxed. The fact that water from the natural or artificial waterways in the district is not used on certain lands does not exempt them from taxation.[334]

This last provision of the law was added in 1956. It appears that, although the basic law was enacted in 1938, no irrigation district was formed until after the 1956 amendment. This may have been due at least in part to the provision of the original 1938 act that lands which do not receive "benefit from the operation of an irrigation district" and "which do not use water from natural or artificial waterways within the district" could not be taxed. Apparently, this would have made it difficult to sell bonds, because often there would be inadequate assurance that enough money would be forthcoming to pay the obligations.[335] Apparently to remedy this situation, in 1956, the Legislature added a section to the law so that lands which would not benefit from being in the district were to be excluded when the district was formed,[336] and amended the law to make all other lands in the district liable for taxes regardless of use of water.[337] It is as yet too early to determine the effectiveness of this action.

It might be noted that the provision of the law providing for a charge for the use of water is in direct conflict with R.S. 9:1101 (See *Ownership of Waters,* supra) which provides that: "There shall never be any charge assessed against any person for the use of the waters of the state for municipal, industrial, agricultural, or domestic purposes." As the irrigation district statutes are the later expression of the legislative will, apparently this sentence of R.S. 9:1101 has been nullified at least so far as irrigation districts are concerned. Nevertheless, it would seem that an irrigation district might still be required to pay for any nonnavigable waters it might take, to the extent that other riparian rights are infringed, under the theory that the right to use these waters is vested in the riparian owners. (See *General Nature of Riparian Rights,* supra.)

Since the 1956 amendment of the law on irrigation districts, the First Joe's Bayou Irrigation District has been formed. A dam and reservoir have been constructed within the District (on Joe's Bayou in East Carroll Parish) by the Department of Public Works, for irrigation, flood control, and other purposes.[338] Water and flowage rights were

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[333] L.S.A.—R.S. 38:2116.

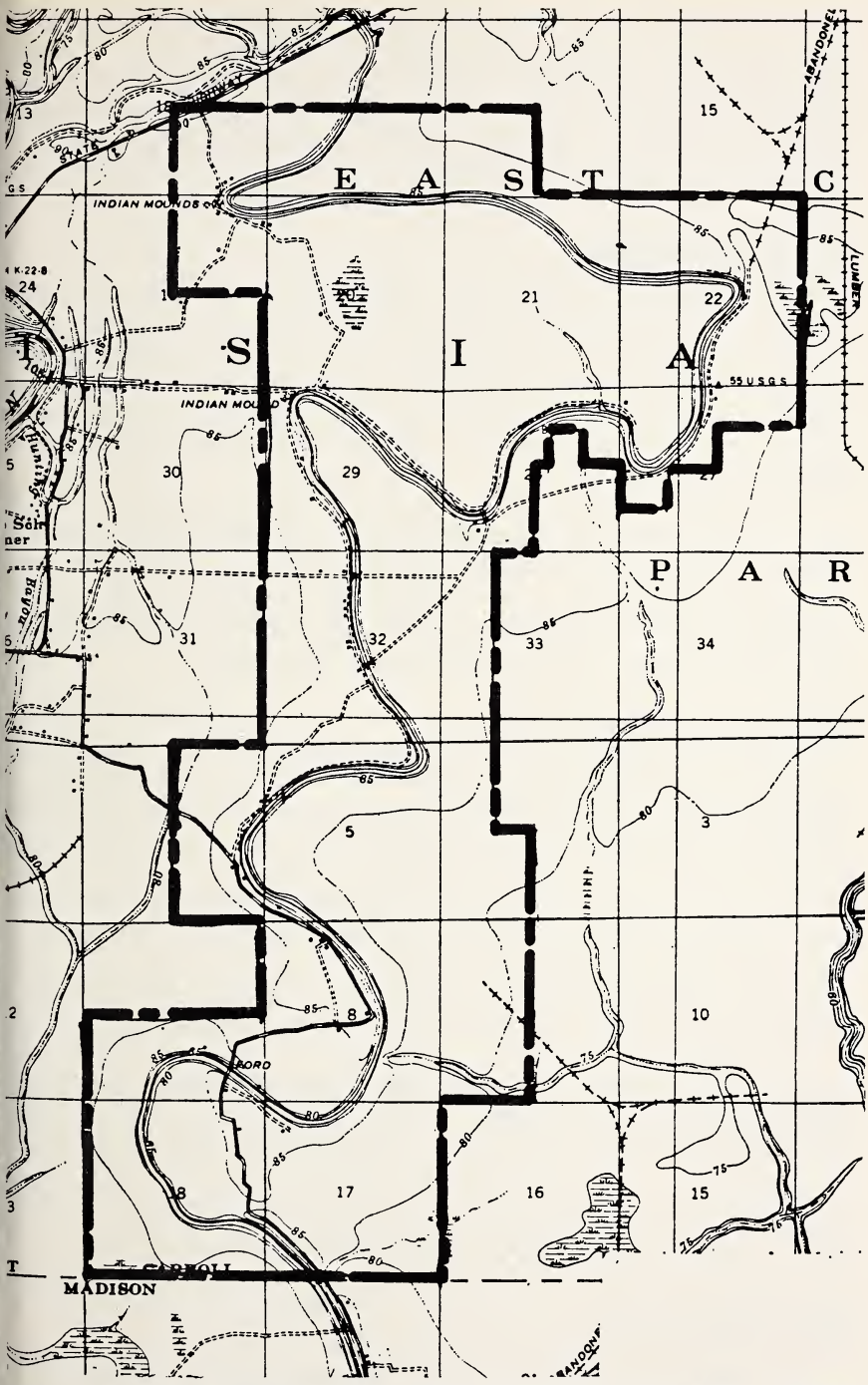
[334] L.S.A.—R.S. 38:2118.

[335] See *Water Problems in the Southeastern States,* Louisiana Legislative Council, Research Study No. 11 (Dec., 1957), pp. 28-29.

[336] L.S.A.—R.S. 38:2101 (C), added by Acts 1956, No. 462.

[337] L.S.A.—R.S. 38:2118, as amended by Acts 1956, No. 461.

[338] The Department utilized some of its general operating funds for this purpose. The legislation on irrigation districts provides that an irrigation district may coordinate its works with state and federal flood control works and navigation projects. L.S.A.—R.S. 38:2112.



First Joe's Bayou Irrigation District (8750 acres, East Carroll Parish, Louisiana. Heavy, black line indicates district boundary.)

acquired by the district from adjoining landowners in consideration c expected benefits resulting from the impoundment of water for irrig tion, stock, and recreational purposes. Some irrigation water was take from the structure in 1958 by one adjoining owner. As of April 1959, no assessments or charges or water use regulations had been in posed and no attempt had been made by the district to sell any revenu bonds.[339]

Waterworks Districts

Police juries may divide their respective parishes into waterwor districts. Each district is authorized to construct, operate, and maintai a "waterworks system." It may exercise the power of expropriation an may issue bonds and levy taxes for such purposes. It may dispense wat to persons within or outside the district. Twenty-five or more landowne within a proposed district may by petition require the police jury t establish such a district.[340]

It also may be noted that the *Bayou Lafourche Fresh Water Distri* was authorized by constitutional amendment in 1950 "for the purpose furnishing fresh water from the Mississippi River to the incorporate villages, towns and cities within its boundaries or adjacent thereto . . ."[3 Legislation has been enacted to create such a district and to authori expenditure of state funds in furtherance thereof.[342]

Soil Conservation Districts

The interrelationship between soil conservation and water contr is so great that many measures taken in the field of soil conservatio must of necessity entail a certain control over water also. For exampl one important method of conserving the soil is to retard the spe with which water runs off it and thereby to reduce the amount of so that is carried away. Furthermore, the enabling legislation which pr vides for the creation of Soil Conservation Districts, as amended i 1956, specifically authorizes such districts to perform broad functio with respect to water resources, in addition to carrying out various so conservation measures.[343] We shall discuss this legislation primari in terms of its relation to water resources. It is clear that the legisl tion is concerned with more than soil practices, for included in t legislative declaration of policy is the statement that the policy the Legislature is to provide "for the prevention of floodwater ar

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339 Based on information supplied by Henry McPherson, President of the D trict, Frank Byerley, Secretary-Treasurer of the East Carroll Parish Police Jury, a Calvin T. Watts, Assistant Director, Louisiana Department of Public Works.

340 L.S.A.—R.S. 33:3811, et. seq. Seventeen waterworks districts were reported be in existence in the 1957 U. S. Census of Governments, Vol. 1, No. 3, Local Go ernment Structure, p. 36.

341 L.S.A.—Const. of 1921, Art. 15, sec. 3.

342 Acts 1950, No. 113; Acts 1952, No. 192; see also Acts 1952, Nos. 191 and 566.

343 La. Acts 1938, No. 370, amended by La. Acts 1956, No. 10, and also by A 1958, No. 231. Acts are embodied in L.S.A.—R.S. 3:1201—3:1217.

sediment damages, and for furthering the conservation, development, utilization, and disposal of water."[344]

Twenty-six soil conservation districts, collectively covering the entire state (except Plaquemines Parish) were in existence in January, 1959.[345] The legislation specifies that each district shall be governed by five supervisors, of whom two are appointed by the State Soil Conservation Committee and three are elected by the landowners of the district.[346]

The districts have the power "To carry out preventive and control measures and works of improvement for flood prevention or the conservation, development, utilization and disposal of water within the district . . . on lands owned or controlled by this state or any of its agencies, with the cooperation of the agency administering and having jurisdiction thereof, and on any other lands within the district upon obtaining the consent of the owner as well as occupants of such lands or the necessary rights or interests in such lands."[347]

The districts are authorized "to acquire, by purchase, exchange, lease, gift, grant, bequest, devise, or otherwise, any property . . . or rights or interests therein . . ."[348] In this connection, it is also provided that "No provision with respect to the acquisition, operation, or disposition of property by other public bodies shall be applicable to a district organized hereunder unless the legislature shall specifically so state."[349] It is expressly stated that the districts may not levy taxes or special assessments.[350]

One purpose of the districts is to cooperate, assist, and enter into agreements with individual landowners in the carrying out of works of improvement for the conservation, development, and utilization of water. (A district may use funds received from state or federal agencies or income from its property.) This would be voluntary on the part of the landowner, although the supervisors could attach such conditions to the aid as they deem necessary.[351]

It would appear that such districts do not have broad powers to make regulations to control water use. There is, however, a method by which the supervisors could promulgate regulations having the force of law. The supervisors of each district are authorized to formulate regu-

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[344] The act commences with a legislative determination that to "prevent floodwater and sediment damages, and further the conservation, development, utilization, and disposal of water, it is necessary that . . . works of improvement for flood prevention or the conservation, development, utilization, and disposal of water be adopted and carried out; . . ." L.S.A.—R.S. 3:1201 (D).

[345] See L.S.A.—R.S. 3:1204 (A) in which the names of the 26 districts are listed.

[346] L.S.A.—R.S. 3:1205 (F), R.S. 3:1206, and R.S. 3:1207.

[347] L.S.A.—R.S. 3:1208 (1).

[348] L.S.A.—R.S. 3:1208 (3).

[349] L.S.A.—R.S. 3:1208 (10). For an opinion that such districts apparently do not have expropriation powers, see Opinion, dated Jan. 10, 1955 of Mr. Carrol Buck, 2nd Ass't Attorney General, State of Louisiana.

[350] L.S.A.—R.S. 3:1208 (11).

[351] L.S.A.—R.S. 3:1208 (2), (7), (9).

lations, including provisions to require the carrying out of necessary engineering operations such as construction of terraces, terrace outlets check dams, dikes, ponds, ditches, and other necessary structures.[352] These formulated regulations must then be presented to the landowners of the district in a special referendum. If approved by a two-thirds majority of the votes cast, the regulations may be enacted into law by the supervisors.[353] Administrative and judicial processes are available to any landowner who feels that the ordinance imposes great practical difficulties or unnecessary hardship upon him.[354]

The *State Soil Conservation Committee* acts primarily as a coordinating and advisory agency for the soil conservation districts and assists in obtaining the cooperation of the Soil Conservation Service, U. S. Department of Agriculture, and other federal or state agencies in the operation of such districts.[355]

Sabine River Authority

In 1950, the Legislature provided that:

> All the territory in the parishes of DeSoto, Sabine, Vernon, Beauregard, Calcasieu and Cameron, lying within the watershed of the Sabine River and its tributary streams, shall be embraced in the limits of and shall constitute a conservation and reclamation district to be known and styled 'Sabine River Authority, State of Louisiana.'[356]

The Authority is governed by a 12-member board of commissioners.[357] It is an agency and instrumentality of the state and is a corporation and body politic, invested with all rights and immunities conferred by law upon other corporations of like character within the

[352] L.S.A.—R.S. 3:1209.

[353] L.S.A.—R.S. 3:1209.

[354] L.S.A.—R.S. 3:1212.

[355] L.S.A.—R.S. 3:1204 (D). The Committee consists of seven members. Five are elected by the soil conservation district supervisors in convention (one member from each of five state areas). The other two are the Dean of the College of Agriculture of the Louisiana State University and the State Commissioner of Agriculture. L.S.A.—R.S. 3:1204 (A).

[356] L.S.A.—R.S. 38:2321. The provisions covering the Authority are contained in L.S.A.—R.S. 38:2321 through L.S.A.—R.S. 38:2337. The original provisions concerning the Authority were set forth in Act No. 261 of 1950 and also Act. No. 260 of 1950. The two Acts were identical in terms and purpose, but Act. No. 260 contained an additional section conditioning the operative force of the Act to the ratification of an amendment to Article XIV of the Louisiana Constitution. When this amendment failed of passage, Act. No. 260 was ineffective. Act No. 261, not being dependent upon the Constitutional amendment, remained in effect, forming the basis of the present Statutes. Certain amendments to the Act were enacted in 1956. (Acts 1956 Nos. 116 and 432.) A proposed constitutional amendment to incorporate the legislation creating the Authority in the State Constitution (Acts 1956, No. 632) was voted against by the people.

[357] L.S.A.—R.S. 38:2322. The Director of Public Works is a member and chairman of the board, ex officio, while the other 11 members are appointed by the Governor for terms of four years. Four of the members appointed by the Governor must be residents of Sabine Parish, two of Vernon Parish, and two of DeSoto Parish.

state. Expressly withheld from the Authority, however, is the power to levy taxes. However, it is not required to pay property taxes, nor excise, license, or other taxes on its operating revenues. All bonds issued and their transfer and income therefrom are likewise exempted from taxation within the state.[358]

The powers of the Authority are comprehensive. It has the power:

> To conserve, store, control, preserve, utilize, and distribute the waters of the rivers and streams of the Sabine watershed; to drain and reclaim, or cause to be drained and reclaimed, the undrained or partially drained marsh, swamp and overflow lands in the district of said Authority, with the view of controlling floods and causing settlement and cultivation of such lands; and in addition to all of the aforementioned powers for the conservation and beneficial utilization of water resources, to control and employ such waters of the Sabine River and its tributaries in the State of Louisiana, including the storm and flood waters thereof, as are hereinafter set forth;[359]

The particular "control and employment" of the waters set forth following the above-quoted paragraph includes distribution and conservation of the water for domestic, municipal, irrigation, hydroelectric, manufacturing, flood control, and navigation purposes.[360]

The applicable legislation also provides:

> So far as authority is vested in the legislature to grant such right, the Sabine River Authority is hereby expressly granted and vested with full right to use all waters and to possess all water rights in the waters of the Sabine River and its tributaries necessary to the carrying out of its corporate objectives, and the right herein so vested in the Authority shall be prior and superior to all other rights in such waters, provided only that water and riparian rights now vested in private persons or entities shall not be taken or damaged without the paying of adequate compensation therefor, which compensation shall be determined in the manner hereinafter provided for the expropriation of property.[361]

The Authority is expressly granted the power of expropriation.[362]

For the purpose of providing funds for the acquisition of any property, including the acquisition of water rights, the Authority may issue bonds in anticipation of the collection of its revenues. Total indebtedness cannot exceed $50,000,000. The Authority may pledge to the payment of all such bonds all or any part of its revenues, and, additionally, may secure them by mortgage lien or deed of trust upon all or any properties it may own.[363]

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358 L.S.A.—R.S. 38:2324.

359 L.S.A.—R.S. 38:2325 (J).

360 L.S.A.—R.S. 38:2325 (J).

361 L.S.A.—R.S. 38:2328 (E). It may be noted here that there possibly are no private vested rights in the waters of navigable streams. See *Navigable Watercourses: Right to Use Water*, supra.

362 L.S.A.—R.S. 38:2325 (b).

363 L.S.A.—R.S. 38:2330.

The Authority has no powers of taxation, but it may obtain revenues under its power to collect charges and rentals for its facilities and services.[364] This power to charge for facilities and services might conflict with the provision of L.S.A.—R.S. 9:1101 which provides that: "There shall never be any charge assessed against any person for the use of the waters of the state for municipal, industrial, agricultural, or domestic purposes." Whatever conflict that might be involved, however, has been resolved by Section 8 of Acts 1956, No. 432, which reads, in part, "To the extent that there may be any conflict between the provisions of R.S. 9:1101 and the provisions of this Act, the provisions of this Act shall be controlling."[365]

Further powers of the Authority authorize it to establish or provide for public parks and other recreation facilities and to acquire land for such purposes, to make contracts to effect the construction and operation of toll bridges or ferries over water owned by it, and to own and operate toll bridges and ferries across any of the waters within its jurisdiction.[366] The board of commissioners also has the power to adopt and promulgate all reasonable regulations relating to sanitary conditions of all waters in its reservoirs and all waters flowing into its reservoirs. They can also regulate residence, hunting, fishing, boating and camping and all recreational and business privileges in and around its reservoirs, the Sabine River and its tributaries.[367]

The only express power regarding pollution that is given the Authority is that which authorizes the board of commissioners to make regulations to preserve the sanitary conditions of its reservoirs.[368] Its general powers over rivers and streams include those to "conserve, store, control, preserve, utilize and distribute" and "to control and employ."[369] It is difficult to determine to what extent these words grant general powers to control pollution. It may be noted that the Stream Control Commission has been given broad powers of control over pollution of the waters of the state.[370] In view of the broad powers over pollution given the Commission and the lack of any specific grant of such powers to the Authority, the Stream Control Commission perhaps has jurisdiction, either exclusively or concurrently, over pollution within the Authority's territorial limits.

In brief, the Authority is given the power to control and distribute the waters of the rivers and streams within its jurisdiction in the way it deems to be most beneficial, taking into account all uses that might be made of the water by competing interests. It must, however, provide

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[364] L.S.A.—R.S. 38:2325 (f).

[365] In this Act, an amending act to the original Sabine River Authority act, the Authority is granted the right to make charges for the facilities and services of the Authority.

[366] L.S.A.—R.S. 38:2333, R.S. 38:2332, and R.S. 38:2335, respectively.

[367] L.S.A.—R.S. 38:2331.

[368] Ibid.

[369] L.S.A.—R.S. 38:2325 (J).

[370] See *State Stream Control Commission*, supra.

adequate compensation for any vested riparian or other water rights which are taken or infringed in the course of this control and distribution, as noted earlier. The Authority's control is subject also to the provisions of the Sabine River Compact, discussed later.

The only permit issued by the Authority as of January 1, 1959, was to the city of Logansport to take water from the Sabine River for municipal use. Pending before the Authority was an application by the Anacoco-Prairie State Game and Fish Commission to impound water on Upper Bayou Anacoco in Vernon Parish. (This project is discussed under *Fish and Game Preserves.*)

The Authority also has made a study determining the feasibility of, and is planning the construction of, a multiple-purpose dam and reservoir on the Sabine River at Toledo Bend. The dam and reservoir would provide hydroelectric power and water supplies for irrigation, municipal, and industrial purposes. The Authority is cooperating in this endeavor with the Sabine River Authority of Texas. It may be noted that, in carrying out its responsibilities, the Authority is authorized to cooperate with local agencies and private persons and with any agency of the state of Texas or the United States. It may contract with them for the joint construction, operation, or ownership of needed facilities.[371]

Bayou D'Arbonne Lake Watershed District

In 1956, the Legislature created the Bayou D'Arbonne Lake Watershed District, embracing the area of the watersheds of Bayou D'Arbonne, Bayou Corney, Bayou Little D'Arbonne, and Bayou Middle Fork in Lincoln and Union parishes.[372] It is a political subdivision of the state, having as its purpose the conservation of soil and water and the development of the natural resources of the district for sanitary, recreational, and agricultural purposes.[373] It constitutes a body corporate in law, with all powers of a political subdivision of the state relating to the incurring of debt and the issuing of bonds therefor. It has the power of expropriation and may use such power to expropriate property for all its purposes and objectives.[374]

It is empowered to conserve the fresh water supply within its boundaries for the benefit of the inhabitants and property owners within the district and the state, to provide water for commercial, municipal, and any other uses, both within and without the district. It may own in full ownership all servitudes, rights of way, and flowage rights and may acquire same by donation, prescription, purchase, expropriation, or otherwise.[375]

However, "any individual from whom flowage rights, rights of way and servitudes may have been acquired by any means" shall retain

[371] L.S.A.—R.S. 38:2329.
[372] L.S.A.—R.S. 38:2551.
[373] L.S.A.—R.S. 38:2552.
[374] L.S.A.—R.S. 38:2553.
[375] Ibid.

his mineral rights in the lands so encumbered, and lands covered b the lake shall be exempt from all state and local taxes.[376]

The district is governed and controlled by a Board of Commissioners which consists of five members who are appointed by the Governor fo terms of four years each.[377] The board acts for the district in the exer cise of the powers set forth above, but it is subject to certain restrictions It is to assist in conserving soil and water and in developing the wate resources of the district; however, it is to do nothing to interfere wit districts previously organized under Louisiana law.[378] Further, all th powers conferred upon the board are subject to the supervisory contro of the Department of Public Works and the Wildlife and Fisherie Commission, with jurisdiction by the latter over the fish, game, an wildlife of the watershed.[379]

The Board of Commissioners is empowered to make necessary an advisable rules and regulations:

(1) To protect and preserve the properties owned by the distric prescribe the manner of their use by public corporations an persons, and preserve order within and adjacent thereto;

(2) To prescribe the manner of building bridges, roads, fences c other works in, along or across any channel, reservoir or othe construction of the district;

(3) To prescribe the manner in which ditches, sewers, pipelines, c other works shall be adjusted to or connected with the work of the district or any watercourse therein, and the manner i which the watercourses of the district may be used for sewe outlets or for disposal of waste;

(4) To prescribe the permissible uses of the water supply provide by Bayou D'Arbonne, a lake to be created within the distric to collect fees therefor, to determine the manner of its distribu tion, and to prevent the pollution or unnecessary waste of suc water supply;

(5) To prohibit or regulate the discharge into sewers of the di trict of any waste deemed detrimental to the works or improv ments of the district;

(6) To coordinate and cooperate with the Department of Publ Works in the construction by the Department of a dam and in poundment of Bayou D'Arbonne;

(7) To regulate hunting, fishing, boating, and any and all activiti upon the waters of the lake created by the impoundment.[380]

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[376] L.S.A.—R.S. 38:2570 to 38:2572. (See Acts 1956, No. 351 for a similar pro sion regarding lands used for a game and fish preserve.) These sections also gra to the district the right to use any state-owned lands within the district for t purpose of constructing the Bayou D'Arbonne Lake and related structures.

[377] L.S.A.—R.S. 38:2555.

[378] L.S.A.—R.S. 38:2558 (3)

[379] L.S.A.—R.S. 38:2564.

[380] L.S.A.—R.S. 38:2559.

The Department of Public Works is a general supervisory agency over the Board of Commissioners. It is to construct and create the Bayou D'Arbonne Lake, and to this end, it is given full powers of expropriation of property.[381]

The Legislature has appropriated a million dollars to be expended by the Department of Public Works for the purpose of acquiring "the rights of way, flowage rights, and servitudes" and for construction of a dam, reservoir, and other suitable structures for the creation of the lake.[382]

The Wildlife and Fisheries Commission has the right to determine and fix the necessary rules and regulations pertaining to the fluctuation of the waters of the lake and to do any other thing necessary and proper within its discretion for the proper management of fish, game, and wildlife over, along, and upon the lake, working in conjunction with the Board of Commissioners.

Three bodies or agencies exercise jurisdiction over the operations of the watershed district—the district's Board of Commissioners, the Department of Public Works, and the Wildlife and Fisheries Commission. The Department of Public Works apparently is to be in direct charge of the construction of any works necessary to create the Bayou D'Arbonne Lake. The Board of Commissioners of the district is to be in charge of the actual operation and functioning of the district, under the supervision of the Department of Public Works. The Board's general nature would appear to be analoguous to that of a manager with broad general powers. The Wildlife and Fisheries Commission is to retain jurisdiction over the wildlife of the district.

Iatt Lake Water Conservation District

This district was created by a constitutional amendment approved by the people of the state in 1956[383] for the stated purpose of making available "an adequate fresh water supply for industrial and other consumption in the Grant Parish-Rapides Parish area . . ." The district's authorized purposes, among other things, include the furnishing of water to "cities, towns, villages, industries, corporations, and persons both within and outside the District." It may store, control, distribute, and prevent pollution and blocking of, the waters contained in bodies of water in the district. It may construct new dams, channels and levees, and drain the lands. It may also "prevent the escape of any such waters

[381] L.S.A.—R.S. 38:2563.

[382] La. Acts 1956, No. 226. The proposed reservoir is intended to provide a water supply for domestic, agricultural, municipal, and industrial use, and to provide the area with a game and fish preserve. It has been estimated by Mr. Calvin T. Watts, Assistant Director, Louisiana Department of Public Works, that the total cost of the project may approach $2¾ million.

[383] L.S.A.—Const. of 1921, Art. 15, sec. 4. This provides that it is self-executing without any supplementary action by the Legislature.

until employed to the maximum advantage of the public generally i aiding the development of agriculture, commerce and industries, and i insuring a fair and just distribution of all of said waters for all of th people of the area for the purposes shown."

The district's Board of Commissioners shall consist of five member two each to be appointed by the Police Jury of each parish and on by the Governor. The Board shall constitute an instrumentality of th state and the powers conferred on it "shall be deemed and held to b essential governmental functions" of the state. The board may expropr ate or otherwise acquire or lease property and issue revenue bonc (within prescribed limitations). It may also make certain charges fc its services. It may *not* levy taxes of any kind. But, property acquire and held by the board, and the income therefrom, or from any bonc it issues, is exempt from state and local taxation.

The board is specifically authorized, among other things, (1) t "effectuate and maintain proper depths of water to accommodate th business of the District," (2) "to transfer water between watersheds i the District," (3) "to control the water level in and discharge rat from" the District's reservoirs and other bodies of water in the Distric (4) "to regulate the recreational and other purposes for which sam may be used," (5) "and to take and dispose of all natural water flowin into or originating within the District for all the purposes of th amendment."

It is expressly provided, however, that (1) "the District shall n have authority to destroy or substantially diminish vested water righ without the making of proper compensation therefor," and (2) th Board shall obtain the approval of the Director of Public Works befo issuing any revenue bonds for the payment of any dam or reservoir th may create or aggravate a drainage problem in any city, town, or vi lage within the district, and shall provide necessary drainage faciliti in constructing such dam or reservoir.

It is provided also that "the District may impound, treat, and di tribute to consumers of every nature, all water which may be mad available by reason of its facilities and may make appropriate charg therefor . . . provided only that no charges or fees shall be impos which shall have the effect of materially impairing any water righ presently vested in the owners of property in the District." It may ado appropriate rules and regulations governing the fixing and collection charges and fees "for water and services" and may enter into contrac operative within and without the district, with any consumer of wat or water service governing the sale or purchase of water.

It should be noted that legislation was enacted in 1954 to authori the creation of the *Southwest Louisiana Water Conservation Distri* which would encompass several parishes in Southwestern Louisian However, a proposed constitutional amendment to incorporate th legislation in the Constitution was voted against by the people of th

state, and the legislation was later repealed, in 1956.[384] The authorized purposes of the district (which were somewhat similar to those of the Iatt Lake Water Conservation District) included the furnishings of fresh water to farm and other lands, to industries, and to cities, towns, and villages within the district. The regulation of groundwater usage, as well as of surface bodies of water, was specifically authorized—to protect against salt water intrusion and for other purposes. Authority also was granted to levy a property tax, within limitations.

Recreation and Water Conservation Districts

A 1954 statute enables parishes to create recreation districts which may engage in activities to promote recreation and own and operate recreational facilities.[385]

Statutes were enacted in 1958 specifically to create (1) the Cypress-Black Bayou Recreation and Water Conservation District, in Bossier Parish, (2) a recreation and water conservation district in St. Helena Parish, and (3) the Black Lake Bayou Recreation and Water Conservation District of Red River Parish.[386] The stated purposes, powers, duties, and related provisions of these three statutes are substantially the same. Each provides, among other things, that the district created shall be a political subdivision of the state for the purpose of developing the wealth and natural resources of the district by the conservation of soil and water for agricultural, recreational, commercial, industrial, and sanitary purposes.

The district's powers under all of these statutes include the power to levy taxes, issue negotiable bonds,[387] and expropriate "property and servitudes, rights of way and flowage rights . . ." Each may lease, build, operate, and maintain appropriate works or machinery, and shall have "complete control over any supply of fresh water made available by its facilities which shall be administered for the benefit of persons residing or owning property within the district and if it should be for the benefit of the district, it shall have the authority to sell such water for irrigation, municipal and industrial uses both within and outside the district." Each may cooperate or contract with the U.S. government

[384] La. Acts 1954, No. 161; repealed by Acts 1956, No. 427. For proposed constitutional amendment (Art. 15, sec. 4) see Acts 1954, No. 749 (repealed by Acts 1956, No. 382). See Table 8, Acts 1955 which reflects its failure to be adopted.

Acts 1954, No. 486 also was enacted to authorize the Department of Public Works to construct dams, pumping stations, and other facilities within the district, and to authorize it and the Wildlife and Fisheries Commission to make certain studies. Six hundred thousand dollars in expenditures from state funds were authorized by this Act—conditional, however, on adoption of the Constitutional amendment, which failed to be adopted.

[385] L.S.A.—R.S. 33:4562, as amended by Acts 1958, No. 473.

[386] L.S.A.—R.S. 38:2601 et. seq., R.S. 38:2651 et. seq., and R.S. 38:2701 et. seq., respectively.

[387] However, the legislation creating the Cypress-Black Bayou Recreation and Water Conservation District specifically requires authorization by an election of voters in the district.

and any state department, agency, or corporation for the construction, operation, and maintenance of its facilities, and participate in projects authorized by federal or state law.

Other specified powers of the statutes creating recreation and water-conservation districts include regulating recreational activities (including fishing and boating) and prescribing the way in which pipelines or other works shall be connected with the "facilities of the district or any water course within the district and the manner in which the water courses of the district may be used for the disposal of waste . . ." Each district shall exercise its powers under the supervisory control of the State Department of Public Works, which shall furnish it necessary engineering services. The department may cooperate also in construction of works or facilities considered necessary to the district's purposes by the district and the department.

Fish and Game Preserves

Several state fish and game preserves or wildlife sanctuaries have been created in Louisiana by special statutes.[388] There is also a general statute which enables parishes to establish such preserves.[389] These preserves or sanctuaries are under the supervision of the State Wildlife and Fisheries Commission. In addition, the state commission may set aside state-owned lands or lease privately owned lands for such purposes.[390]

In general, these fish and game preserves are intended for the protection and control of the taking of fish and game. The general statute enabling the creation of preserves by parishes purports to give the 3 member commission of each preserve the authority to "do any and all things necessary for the conservation, protection, and propagation of game and fish in the preserve." This specifically includes authority to "build dykes or dams, dig canals, or excavate lake or stream beds." Expropriation powers are provided.[391]

In 1954, the Legislature authorized the State Department of Public Works to construct a dam and other necessary structures "to create and impound a fresh water supply" within the limits of the Anacoco-Prairie State Game and Fish Preserve, in Vernon Parish. State funds appropriated for this purpose included an appropriation for the department to expend "for the purpose of acquiring such lands, servitudes, rights of way, and flowage rights as may be necessary in connection with the development of the Preserve," primarily for the creation and conservation of the fresh water supply.[392] Although these funds are available

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388 See notes under L.S.A.—R.S. 56:801.

389 L.S.A.—R.S. 56:721 et. seq.

390 L.S.A.—R.S. 56:763 et. seq., and Const. of 1921, Art. 6, sec. 1 (A). See L.S.A.—R.S. 56:751 for a list of state swamplands perpetually dedicated as a game preserve. The Legislature also has provided for cooperation with the national program of wildlife restoration projects of the U.S. Commissioner of Wildlife and Fisheries, Department of the Interior. L.S.A.—R.S. 56:701 et. seq.

391 L.S.A.—R.S. 56:722 to 56:725.

392 La. Acts 1954, Nos. 400 and 401, and Acts 1956, No. 525.

the Police Jury of Vernon Parish has issued ad valorem bonds in the amount of $875,000 to help finance the project. It is a joint project of the Department of Public Works, the Vernon Parish Police Jury, and the Anacoco-Prairie State Game and Fish Preserve. Project plans have been developed to impound water on upper Bayou Anacoco, and the department has been acquiring rights of ways, flowage rights, etc.

As recreational lake waters already exist in the Preserve, the supply of fresh water to be developed by the project is intended primarily for industrial and other uses. The special statute that created the Preserve in 1948 specifically authorizes the Preserve's Commission (in addition to providing a game and fish preserve through the construction of necessary facilities and regulation of the taking of game and fish) "to create and impound an industrial water supply, as per survey and estimates made and estabilshed by the Department of Public Works . . ."[393] The Preserve also was specifically granted the power of expropriation and the authority to sell revenue bonds.[394]

Levee and Drainage Districts

The Mississippi and other major rivers flowing through the state of Louisiana have created a continuing need to protect the low-lying flood plains from periodic flooding. This has led to construction of an extensive system of levees to contain the waters.[395]

The state constitution authorizes the Legislature to provide for a state-wide levee system.[396] The Legislature has created a number of levee districts, each with a board of levee commissioners.[397] In addition to constructing and maintaining levees, they "may do all drainage work

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[393] La. Acts 1948, No. 277, amended by Acts 1956, No. 238. It appears that few, if any, of the other fish and game preserves or wildlife sanctuaries in the state have been expressly authorized to develop industrial, municipal, or irrigation water supplies (nor is the State Wildlife and Fisheries Commission expressly so authorized). However, this statement is based on less than a complete review of the several enabling acts.

For other examples of specific authorizations for the Department of Public Works to construct dams within fish and game preserves, see Acts 1957, No. 38, with respect to dams in the Cocodrie Lake Game and Fish Preserve. The commission in this preserve is authorized to operate gates and other regulatory devices on the dams for "preservation and propagation" of fish and wildlife, subject to a prohibition against reducing the minimum record flow in Bayou Cocodrie or impairing the riparian rights of the downstream landowners. See also, with respect to dams authorized in the Northwest Louisiana Game and Fish Preserve area, Acts 1954, No. 510; Acts 1956, No. 491, amended by Acts 1957, No. 15; and Acts 1957, No. 44.

[394] La. Acts 1948, No. 277, sec. 12.

[395] See *Water Problems in the Southeastern States,* Louisiana Legislative Council Research Study No. 11, Baton Rouge (Dec., 1957), page 38 et. seq.; Asseff, Emmett, *Special Districts in Louisiana,* Bureau of Government Research, Louisiana State University (1951), p. 28 et. seq.; *Louisiana Levee Districts,* Public Affairs Research Council of Louisiana, Baton Rouge (Aug., 1958); and Harrison, Robert W., *Flood Control in the Mississippi Alluvial Valley,* Delta Council, Stoneville, Miss. (undated).

[396] L.S.A.—Const. of 1921, Art. 16.

[397] L.S.A.—R.S. 38:641 et. seq.

incidental to or made necessary by the construction of the levee system in this or adjoining states."[398]

The State Constitution provides that such districts may cooperate with the federal government and neighboring states in the construction and maintenance of the levees.[399] Moreover, they (as well as drainage districts) may contract with the State Department of Public Works to have it bear a portion of the cost of reclamation and drainage projects.[400]

Legislation (L.S.A.—R.S. 38:221) prohibits anyone from placing any rice-flume or other type of conduit "in, through or under" any public levee if ordered not to do so by the levee board or governing authority of the parish.[401] Violators may be fined up to $500 and/or imprisoned up to 60 days. This does not apply, however, to those levees on the Mississippi River outside the limits of the Fifth Louisiana Levee District, the Atchafalaya Basin, the Lafourche Basin, the Grand Basin, the Buras, and the Orleans Levee Districts.[402] Any permission granted to operate siphons "over" the public levees shall be subject to the following regulations found in R.S. 38:222:

1. The location of all siphons shall be at right angles to the axis of the public levee.
2. The levee shall at no place . . . be cut into nor disturbed . .
3. The . . . ends of all siphons shall be located . . . not less than 30 feet on the river side nor 60 feet on the land side from the base of the levee.
4. Both . . . ends . . . shall be so protected as to guard against any local excavation or washout.
5. In the operation of siphons for irrigation . . . no area within 150 feet of the base of any public levee on the land side shall . . . be flooded.
6. All areas subject to flooding . . ., shall be provided, by the owner or operators, with low level ditches (for drainage of levees and highways).
7. No siphons shall be placed over the levees designated in R.S. 38:221 until permission has been obtained from the board of commissioners of the levee district having jurisdiction over the levees.

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398 L.S.A.—R.S. 38:281.

399 L.S.A.—Const. of 1921, Art. 16, secs. 4 and 5. See also R.S. 38:551 et. seq. and 38:112. The state, with the concurrence of an adjoining state, may create levee districts composed of territory partly in each state and may authorize the construction of levees wholly in another state. Levee construction and other flood control functions of the Corps of Engineers, U. S. Army, in which levee districts have cooperated in various ways are discussed in *Louisiana Levee Districts*, supra, pp. 9-10; *Special Districts in Louisiana*, supra. pp. 32-34; *Water Problems in the Southeastern States*, supra, p. 40.

400 L.S.A.—R.S. 38:111.

401 The consent of the State Department of Public Works, as well as the governing bodies of any cities or municipalities in which the public levees may be located, may be required also.

402 Nor does it apply to locks that connect navigation canals with the Mississippi River. Special provisions apply to the conduits for sewerage, gas, or electricity of municipalities and parishes.

R.S. 38:223 extends section 5 of R.S. 38:222 by stating that:

> No person shall in any manner cover with water for any purpose, on the land side of any public levee or levees, any land situated upon the Mississippi River within a distance of 150 feet from the base of any public levee.

Attaining satisfactory land drainage also has been a major problem in Louisiana (and often has been aggravated by the levees built for flood protection).[403] The State Constitution authorizes the Legislature to provide for the creation of drainage and subdrainage districts.[404] Under this authority, legislation has been enacted that enables the creation of two general types of drainage districts: (1) Gravity drainage districts and subdistricts[405] and (2) drainage districts and subdistricts requiring leveeing and pumping.[406] Several such districts have been created.[407] Such districts may be created by the police juries of the respective parishes. If they fail to do so in areas needing a drainage district, they may be required to create a district when petitioned to do so by a certain proportion or number of property owners owning land in the proposed district. But the approval of the Department of Public Works is required before any drainage district requiring leveeing and pumping may be created.[408]

A statewide drainage program is being encouraged and assisted by the Department of Public Works to effect better coordination of the drainage systems throughout entire parishes and watersheds, as the projects of some districts have aggravated drainage and flooding problems in others.[409]

Police juries may construct and maintain drainage ditches and canals and perform related functions.[410] Legislation enables parishes to assume debts of drainage districts if approved by a referendum,[411] and also enables the formation of consolidated drainage districts.[412] In addition,

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403 See Harrison, Robert W., "Louisiana's State Sponsored Drainage Program," *The Southern Economic Journal*, Vol. XIV, No. 4 (April 1948), p. 388.

404 L.S.A.—Const. of 1921, Art. 15, secs. 1 and 2. This also authorizes cooperation with the federal government in drainage and reclamation projects. See also R.S. 38:81.

405 L.S.A.—R.S. 38:1751 et. seq.

406 L.S.A.—R.S. 38:1601 et. seq.

407 See *Water Problems in the Southeastern States*, Louisiana Legislative Council Research Study No. 11 (Dec., 1957), which includes a discussion of drainage districts, on pp. 33-38. (Levee districts are also discussed, on pp. 38-41.)

408 L.S.A.—R.S. 38:1605 and 38:1703.

409 See pp. 33-34 of *Water Problems in the Southeastern States*, Louisiana Legislative Council Research Report No. 5, Baton Rouge, April 7, 1955. The report stated that 25 parish-wide drainage systems had been adopted. See also pp. 37-38 of Dec., 1957 revision (Research Study No. 11); Harrison, Robert W., "Louisiana State Sponsored Drainage Program," supra, note 403; Asseff, Emmett, *Special Districts in Louisiana*, supra, note 395.

410 See *Police Juries*, supra.

411 L.S.A.—R.S. 39:661 et. seq.; Const. of 1921, Art. 14, sec. 14, as amended by Acts 1946, No. 386. This also applies to levee and irrigation districts and certain other types of districts.

412 L.S.A.—R.S. 38:1660 and R.S. 38:1841 et. seq.

the Legislature itself has directly created some consolidated gravity drainage districts,[413] as well as certain "levee and drainage districts," including (1) the Cane River, (2) the Lafourche Basin, and (3) the Red River-Bayou Pierre, levee and drainage districts.[414]

As is the case with levee districts, there are several detailed provisions regarding the creation, dissolution, operation, and financing of these types of districts which we shall not discuss.[415] Such districts have various powers to issue bonds, levy taxes, and expropriate property, within limitations, for a variety of purposes.

Enabling legislation provides that drainage districts requiring leveeing and pumping may be formed "for the purpose of drainage and reclaiming the undrained or partially drained marsh, swamp, and overflowed lands in Louisiana that must be leveed and pumped in order to be drained and reclaimed . . ."[416] It is specifically provided that any such drainage district "may open, deepen and enlarge natural drains within or without the district . . . to make the natural drains effective."[417] ". . . All watercourses shall, if necessary to the drainage of any of the lands in the district, be connected with and made a part of its drainage system."[418] It may also straighten or change the course and flow of any watercourse, pond, lake, creek, bayou or natural stream, fill up any natural stream, and concentrate, divert, or divide the flow of water, provided it makes "adequate provision for the drainage of all lands and property affected thereby." It may construct and maintain ditches, canals, levees, dams, reservoirs, holding basins, and other works of improvement. It may employ expropriation powers for a variety of purposes, including the acquisition of lands, servitudes, reservoirs, holding basins, and rights of way for levees, canals, and ditches.[419]

Gravity drainage districts are provided with more or less similar powers for establishing gravity drainage systems.[420] Their commissioners are specifically authorized to perform all acts "necessary to fully drain all the land in their districts and maintain the drainage when established."[421] This includes authority "to adopt all needful regulations necessary to maintain free and unobstructed the flow of water through the gravity canals, ditches, and drains." The commissioners may also require and control the operation of floodgates in fences that cross the drains, ditches, and canals.[422]

Any drainage district may make provision for the navigation of

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413 La. Acts 1956, No. 234; Acts 1946, No. 91.
414 L.S.A.—R.S. 38:1951 et. seq.
415 L.S.A.—R.S. 38:1481 et. seq.
416 L.S.A.—38:1602.
417 L.S.A.—R.S. 38:1614.
418 L.S.A.—R.S. 38:1638.
419 See L.S.A.—R.S. 38:1614 and 38:1638-1640.
420 L.S.A.—R.S. 38:1764 and 38:1767.
421 L.S.A.—R.S. 38:1767. See also R.S. 38:1794.
422 L.S.A.—R.S. 38:1794.

anals established in its system of drainage.[423] No specific reference to rrigation has been discovered in the enabling legislation. In this connection, the authors are informed that a few years ago some rice armers, who were pumping water out of the parishwide drainage-system anals controlled by the East Carroll Police Jury, were requested to top using the canals for irrigation. At their request, the farmers were ermitted to complete that season's irrigation. Later, they drilled irrigaion wells, as requested, and stopped using the canals.[424]

General legislation provides that the various levee and drainage disricts shall have control over all "public drainage channels" within their mits that are adopted, with or without improvement, as parts of their rainage system, with the approval of the Department of Public Works. hey may adopt rules and regulations for preserving the efficiency of uch drainage channels.[425]

Federal Watershed Protection And Flood Prevention Act

In 1954, the Congress of the United States enacted the Watershed rotection and Flood Prevention Act. As later amended, this act, in eneral, provides for Federal technical, financial and other assistance o such local agencies and organizations as are authorized under state aw to assume responsibility for initiating, carrying out, maintaining, nd operating works of improvement to help conserve, develop, utilize, nd dispose of water for a variety of purposes, including the prevention f erosion and flood water and sediment damages, and the supplementng of any needed downstream flood control measures.[426] Any state or olitical subdivision thereof, soil or water conservation district, flood revention or control district, or other local public agency having auhority under state law to carry out, maintain, and operate the works f improvement is eligible to participate in the program.

ype of Assistance

Upon request, the Department of Agriculture is authorized, among her things, to assist local organizations under specified conditions in: a) conducting surveys and investigations and preparing plans of work, b) making allocations of costs to the various purposes and determining hether benefits exceed costs, (c) entering into agreements to furnish nancial and credit assistance, within specified limitations, and (d) obining the collaboration of other federal agencies. The Soil Conservaon Service has been assigned the responsibility of providing such astance, except that the Farmers Home Administration has been as-

[423] L.S.A.—R.S. 38:1482.

[424] Based on information supplied by Mr. Frank Byerley, Secretary-Treasurer, olice Jury of East Carroll Parish. See note 411, supra, regarding parishwide drainge systems.

[425] L.S.A.—R.S. 38:113.

[426] 68 Stat. 666, 70 Stat. 1088, 72 Stat. 563, 567, and 1605; 16 U.S.C.A. sec. 1001 seq. See also Executive Order No. 10584 (Dec. 20, 1954).

signed the responsibility of making loans and advancements. For certai projects, the approval of certain congressional committees and/or th recommendations of the Departments of the Interior and/or Arm shall be obtained.

Conditions of Assistance

To be eligible for assistance from the Federal government, th local organization must (a) agree to acquire without cost to the Fe eral government the necessary land, easements, and rights of wa (b) acquire, or provide assurance that landowners or water users ha acquired such water rights, pursuant to the state law, as may be neede in the installation and operation of the works of improvement, (c) o tain agreements to carry out recommended soil conservation measur and proper farm plans from owners of not less than 50 percent of th land situated in the general area above each retention reservoir to b installed with Federal assistance, (d) agree to assume a proportiona share of the cost of installing any works of improvement applicable the agricultural phases of the conservation, development, utilizatio and disposal of water, or for fish and wildlife development, and a of the costs applicable to other purposes, such as capacity for industri and municipal water supplies, except that any part of the constructio cost (including engineering costs) applicable to flood prevention an related features shall be borne by the Federal government, (e) agr to make satisfactory arrangements for defraying the cost of operati and maintaining such works, and (f) construct or let contracts f improvements on privately owned property.

Limitations on Size of Projects and Structures

No project under this legislation shall embrace a watershed or su watershed area in excess of 250,000 acres nor shall any single structu have a floodwater detention capacity of more than 5,000 acre-feet nor total capacity of more than 25,000 acre-feet.

The authors are informed that by March 1, 1959, the U. S. Depa ment of Agriculture had received 22 applications for approval of su watershed projects in Louisiana. Nine such applications had been a proved by the Department for preparation of a work plan. Four these had been approved for operation and, in one, construction wo was underway. The sponsoring local organization in all of these proje has been a soil conservation district. A town council was co-sponsor one project. It may be noted that the enabling legislation regarding s conservation districts, as amended in 1956, has broadened the a thorized purposes of such districts so as expressly to include the prev tion of floodwater and sediment damages and the furtherance of t conservation, development, utilization, and disposal of water.[427]

[427] See *Soil Conservation Districts*, supra, for a more detailed discussion of th functions. The Attorney General has stated that soil conservation districts may as "local organizations" under this federal legislation. See opinion dated January 1955, of Mr. Carrol Buck, 2nd Assistant Attorney General, State of Louisiana.

The project under construction is in the Bayou Dupont Watershed n Natchitoches and Sabine parishes. The project embraces 56,610 cres. Its primary purpose is the prevention of floodwater and sediment lamages. In this connection, soil and water conservation practices will e carried out voluntarily on individual farms, and the Upper West Red River Soil Conservation District (which is the sponsoring organization) as awarded contracts to private contractors for the construction of 8 f 22 contemplated floodwater-retarding structures (dams and reservoirs) within the watershed.[428]

The other projects that had been approved for operation are the Upper Bayou Nezpique Watershed project (embracing an area of 214,000 acres), the Upper West Fork of Cypress Bayou Watershed project (5,500 acres) and the Bear Creek Watershed (13,500 acres). A primary purpose of each project is the same as the Bayou Dupont project—the prevention of floodwater and sediment damage. However, the Upper West Fork project also includes provisions for supplying Plain Dealing with city water when the need arises, and water for fish and wildlife development, while the Bear Creek project includes provisions for the drainage of wet lands.

The five additional projects that had been approved for planning nd their stated purposes are (1) the Johnson Bayou (drainage and lood prevention), (2) the Bayou Rapides (irrigation), (3) the Big Ditch, Pleasant Valley, and Scarborough Creek (prevention of floodvater and sediment damage), (4) the Beaver Button, Bentley Hollow, nd Cook Creek (prevention of floodwater and sediment damage) watershed projects, and (5) Baker Canal (flood prevention and drainage).[429]

Interstate Compacts

Sabine River Compact and Administration

In 1953, Louisiana and Texas entered into a compact regarding the listribution and use of the waters of the Sabine River watershed.[430]

The compact deals only with distribution and use of the waters, t being set forth at the outset that:

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[428] It may be noted that in 1956, the Legislature appropriated funds for the Department of Public Works to expend in construction of dams, reservoirs, and related structures so as to regulate the flow of Bayou Dupont (La. Acts 1956, No. 421). ut a 1957 amendment limited the department's authority to expend these funds o the purposes of "making water resources studies and in developing irrigation and ater conservation projects" acting alone or in cooperation with other agencies or istricts. (La. Acts 1957, No. 14.)

[429] The above description of watershed projects is based on information supplied y Mr. H. B. Martin, State Conservationist, Soil Conservation Service, U.S.D.A., lexandria, La. A publication entitled "Facts About the Watershed Protection and lood Prevention Act" may be obtained from his office.

[430] The compact was signed January 26, 1953. It was ratified, approved, and onfirmed by the Louisiana Legislature by Acts 1954, No. 36, L.S.A.—R.S. 38:2329 et. eq.; by the Texas Legislature, by Acts 1953, ch. 63, Vernons Ann. Tex. Civ. St. rt. 7466 i; and by Congress by the Act of Aug. 10, 1954, c.668, 68 stat. 690.

The Sabine River Compact provides for the equitable apportionment of the wate of the Sabine River between the states of Louisiana and Texas. As used in th Compact, "Stateline reach" extends from "Stateline," which is a point just north Logansport, La., to Sabine Lake.

It is recognized that pollution abatement and salt water intrusion are problems which are of concern to the States of Louisiana and Texas, but inasmuch as this Compact is limited to the equitable apportionment of the waters of the Sabine River and its tributaries between the States of Louisiana and Texas, this Compact does not undertake the solution of those problems.[431]

The compact is intended to settle any present or future controversy between the states concerning the use of the waters of the Sabine River where it forms the border of Texas and Louisiana. The point at which the waters in downstream flow first touch both states is defined to be the "Stateline."[432] (See page 106.) Above the Stateline, Texas has free and unrestricted use of all waters of the river and its tributaries, subject to certain provisions.[433] One of these provisions is that nothing in the compact shall be construed as affecting any present or future rights or powers of the United States in, to, and over the waters of the Sabine River Basin.[434] The other provision is that neither state may reduce the flow of the river so that its flow at the Stateline falls to less than 36 cubic feet per second.[435] Reservoirs and permits above the Stateline existing as of January 1, 1953, are not liable for maintenance of this flow, but those reservoirs on which construction was commenced after this date are liable for maintaining such flow. It should be noted that minimum flows of less than 36 cubic feet per second have been recorded in the past at the Logansport gauge,[436] which is to be the gauge at which the Stateline flow is to be determined under the compact.[437] Apparently, all Texas reservoirs on which construction was started after January 1, 1953, and which lie in the Sabine watershed will be required to contribute water to help maintain a flow of 36 cubic feet per second, even if the flow that would "naturally" reach the gauge would be less than 36 cubic feet.[438]

Before discussing the way in which the waters are apportioned between the states, it is necessary to set forth certain additional definitions of terms as used in the compact:[439]

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431 L.S.A.—R.S. 38:2329.

432 L.S.A.—R.S. 38:2329, Sabine River Compact, Article I (a). The compact provides that "Stateline" as defined therein shall not be construed to define the actual boundary between the two states and that nothing in the compact shall constitute an admission by either state regarding its actual location.

433 L.S.A.—R.S. 38:2329, Sabine River Compact, Article IV.

434 Id, Article X.

435 Id, Article V (b) (1).

436 Marsh, *Reports on the Surface Water Supply of Louisiana, to September 30, 1938*, Department of Conservation, Louisiana Geological Survey (In cooperation with United States Department of the Interior, Geological Survey), p. 138.

437 L.S.A.—R.S. 38:2329, Sabine River Compact, Article I (c).

438 But "no reservoir shall be liable for a greater percentage of this minimum flow than the percentage of the drainage area above the Stateline contributing to that reservoir, exclusive of the watershed of any reservoir on which construction was started prior to January 1, 1953." L.S.A.—R.S. 38:2329, Sabine River Compact, Article V (b) (3).

439 L.S.A.—R.S. 38:2329, Sabine River Compact, Article I.

> The term "Waters of the Sabine River" means the waters eithe originating in the natural drainage basin of the Sabine River, o appearing as streamflow in said River and its tributaries, from it headwater source down to the mouth of the River where it enter into Sabine Lake . . .
>
> The term "Stateline reach" means that portion of the Sabine Rive lying between the Stateline and Sabine Lake . . .
>
> The term "Domestic use" means the use of water by an individua or by a family unit or household for drinking, cooking, launde ing, sanitation, and other personal comforts and necessities; an for the irrigation of an area not to exceed one acre, obtained d rectly from the Sabine River or its tributaries by an individua or family unit, not supplied by a water company, water district, o municipality . . .
>
> The term "stock water use" means the use of water for any an all livestock and poultry . . .
>
> The term "consumptive use" means use of water resulting in i permanent removal from the stream . . .
>
> The terms " 'domestic' and 'stock water' reservoir" mean any re ervoir for either or both of such uses having a storage capacity c fifty (50) acre-feet or less . . .
>
> "Stored water" means water stored in reservoirs (exclusive of d mestic or stock water reservoirs) or water withdrawn or release from reservoirs for specific uses and their identifiable return flo from such uses . . .
>
> The term "free water" means all waters other than "stored waters in the Stateline reach including, but not limited to, that appea ing as natural streamflow and not withdrawn or released from reservoir for specific uses. Waters released from reservoirs for th purpose of maintaining streamflows (at Stateline)[440] shall b "free water." All reservoir spills or releases of stored waters mad in anticipation of spills, shall be free water.

The basic provision for the apportionment of the waters is that a "free water" in the Stateline reach is to be divided equally betwee the two states.[441] Each state has the right to withdraw its share of th water from the channel of the Sabine River, but all points of diversio must be recorded and approved by the Sabine River Compact Admi istration (discussed below) as well as "the State agency charged with th administration of the water laws" of the state in which the diversio point is located.[442] It is further provided that:

> Neither State shall withdraw at any point more than its share the flow at any point except, that pursuant to findings and d termination of the administration as provided under Article V of this Compact, either State may withdraw more or less of its sha

[440] Authors' insertion.
[441] Id, Article V (a).
[442] Id, Article VII (g) (5).

of the water at any point provided that its aggregate withdrawal shall not exceed its total share.[443]

Except for jointly stored water (discussed below), each state must withdraw its apportionment of the freewater flow as it occurs with no allowance of accumulation of debits or credits. A failure to use the apportioned share does not constitute a relinquishment of the right to future use, nor does it give the right to future use in excess of the apportioned share.[444]

> Waters stored in reservoirs constructed by the States in the Stateline reach shall be shared by each State in proportion to its contribution to the cost of storage. Neither State shall have the right to construct a dam on the Stateline reach without the consent of the other State.[445]

The states may vary the rate and manner of withdrawal of their shares of these jointly stored waters. They may not, however, withdraw more than their pro-rata share in any one year except by authority of the administration.[446]

In the apportionment of waters, domestic and stock water uses are excluded, as are domestic and stock water reservoirs.[447] If either state builds reservoir storage on the tributaries of the Sabine located wholly within its boundaries and below the stateline, any reduction in the flow of the Sabine resulting from such storage is deducted from the state's share of the waters; conversely, any increase in the Sabine's flow from released water from these reservoirs is added to the state's share.[448]

In summary, it appears, that each state is entitled to half of the flow of the Sabine from the Stateline to Sabine Lake. Taken into account in determining this share is the effect on the flow of any storage of water on the tributaries that enter the river below the Stateline. Waters used for domestic and stock water uses are ignored.

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[443] Id, Article V(f).

This sentence would seem to imply that a state is limited in its withdrawals to half of the free water flow at any particular point of withdrawal, with the exception that the administration may find and determine that at any particular point one state may withdraw more than this amount, so long as its aggregate withdrawals do not amount to more than its share. In other words, it would seem that the sentence was intended to provide for administration authorization of withdrawals amounting to more than a state's share at any particular withdrawal point. There appears, however, to be one possible difficulty with this interpretation; which is, that, as far as the authors have been able to determine, there is no provision in Article VII empowering the administration to make such a determination. Because of this, it is possible that the sentence means merely that a state may withdraw more than its share at any particular point if the findings of the administration are that the withdrawal will not place the aggregate withdrawal of the state at more than its share. In other words, possibly a state might withdraw any amount of water at any particular point so long as it does not exceed its total aggregate withdrawals as determined by the administration.

[444] L.S.A.—R.S. 38:2329, Sabine River Compact, Article V(i).

[445] Id, Article V(g).

[446] Id, Article V(h).

[447] Id, Article V(j).

[448] Id, Article V(d).

Except for the provision relating to storage of water on tributarie there appears to be no provision relating to the states' use of the wate of these tributaries, nor to the division between the two states of thes waters. It is possible, however, that the same provisions that appl to the Sabine itself apply also to its tributaries. Article V of the con pact begins with the phrase, "Texas and Louisiana hereby agree upo the following apportionment of the waters of the Sabine River . . "Waters of the Sabine River" are defined in Article I, set forth abov to include the tributaries of the Sabine. This, along with the abov quoted statement at the outset of the compact, indicates that the i tention of the compact is to apportion the waters of tributaries as we as the waters of the Sabine. But no later provision clearly spells ou that tributaries are to be apportioned between the states. Article V does provide that any point of diversion on the tributaries and th Sabine River must be approved by the administration,[449] and this wou indicate that the waters of the tributaries are to be treated as th Sabine River itself. Possibly then, the intention of the compact that tributaries are also to be divided equally between the states the same way as the Sabine.

The administration is officially entitled the "Sabine River Co pact Administration." It consists of two members from each state a of one nonvoting member chosen by the President of the United Stat to represent the Federal government. This member is ex-officio chairma of the administration. The Director of the Louisiana Department Public Works serves as an ex-officio member; the other member is resident of the Sabine Watershed and is appointed to a four-year term.

The administration has the power to make regulations consiste with the provisions of the compact.[451] It can employ such personnel i cluding engineering and legal personnel, as it deems necessary.[452] It s to collect and analyze all factual data necessary or proper for the adm istration of the compact, including streamflows, water uses and div sions, supplies, and storage.[453] It is to investigate all violations of t compact and report its findings to the states as it deems fitting. It c acquire and hold all property necessary for the performance of its fu tions and duties under the compact.[454]

Findings of fact made by the administration are not conclusive any court, agency, or tribunal, but unless they are satisfactorily rebutt they constitute evidence.[455] A quorum for any meeting consists of th voting (state) members, each of whom has one vote. Each decision determination requires the concurring vote of three members.[456]

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[449] Id, Article VII (g) (5).
[450] Id, Articles VII (a) to VII (c).
[451] Id, Article VII (f) (1).
[452] Id, Article VII (f) (3).
[453] Id, Article VII (f) (1), (g).
[454] Id, Articles VII (g) (7) and (8).
[455] Id, Article VII (i).
[456] Id, Article VII (e).

In case of a tie vote, arbitration is provided for. Each side is to choose an arbitrator, and the third is to be chosen by the two arbitrators. If the arbitrators fail to select a third arbitrator within 10 days, he shall be chosen by the representative of the United States.[457]

It is explicitly provided in the compact that all rights to any of the waters which have been obtained in accordance with the laws of the state are recognized and affirmed. It is further provided, however, that withdrawal of water for the satisfaction of such rights is subject to the availability of supply in accordance with the apportionment of water provided under the compact.[458] Apparently, then, riparian rights are not to be affected by the compact, except that the taking of water under these rights cannot be so great as to use up more than the share apportioned to the state. It is further provided that withdrawals by the states shall not impair or prejudice the existing rights of users of Sabine River waters.[459] It is not clear whether these provisions protecting riparian rights extend to allowing new diversion by riparian owners without the administration's approval of the diversion point as provided for in Article VII.[460] In any event, it appears that private uses of water legally exercised prior to enactment of the compact are not to be infringed upon except to the extent that they might amount to a use of more than the state's share of the waters.

In the course of its operations, the administration has issued a permit to the city of Logansport to use water from the Sabine River, following a similar permit by the Sabine River Authority. (See *Sabine River Authority*.) It has also collected and maintained information on the various existing uses of water from the river and its tributaries.

Other Interstate Agreements and Arrangements

Another interstate compact into which the state of Louisiana has entered (along with Florida, Mississippi, Alabama, and Texas) is the Gulf States Marine Fisheries Compact. The purpose of this compact is to promote the better utilization of the fisheries of the seaboard of the Gulf of Mexico.[461]

In 1955, Congress specifically authorized the states of Louisiana, Texas, Arkansas, and Oklahoma to negotiate with respect to the formulation of an interstate compact providing for an equitable apportionment of the waters of the Red River and its tributaries. Such negotiations were in progress in January 1959.[462]

Polluted water coming into the state from other states has been the source of some difficulty in Louisiana.[463] No interstate compact with

457 Id, Article VII (j).
458 Id, Article III.
459 Id, Article V (f).
460 Id, Article VII (g) (5).
461 See L.S.A.—R.S. 56:41 et. seq.
462 69 Stat. 654.
463 See *Water Problems in the Southeastern States*, Louisiana Legislative Council Research Study No. 11 (Dec., 1957), pp. 23-27.

respect to the control of such pollution had been entered into b Louisiana as of January 1959.[464] Some action has been taken, howeve under the Federal Water Pollution Control Act.[465] In addition to pr viding for Federal financial assistance and technical services to state interstate agencies, and municipalities for pollution abatement, this a provides that the Federal government may take action to secure th abatement of the pollution of interstate waters in certain circumstance The act is administered by the Surgeon General of the Public Healt Service, under the supervision of the Secretary of Health, Education, an Welfare.

Whenever the U. S. Surgeon General, "on the basis of reports, su veys, or studies, has reason to believe" that the pollution of interstat waters is occurring,[466] or if requested by a governor or state water po lution control agency, "he shall give formal notification" to the stat water pollution control agency (or any interstate agency) of the sta or states in which the pollution is discharged and shall call a confe ence of the agencies in the respective states. After such conference, he believes that the health or welfare of persons in another state endangered and effective progress is not being made to abate suc pollution in the state in which the pollution is discharged, he sha recommend that necessary remedial action be taken by the appropria water pollution control agency. If appropriate steps are not taken withi a specified time, the U. S. Secretary of Health, Education, and Welfa is to call a public hearing to be held before an appointed board in near the area in which pollution originates. The board shall determi whether appropriate steps have been taken to abate the pollution an if not, it may recommend reasonable and equitable measures to be ca ried out. If measures reasonably calculated to abate the pollution a not carried out within an additional specified time after proper noti to the persons discharging the polluting material and the appropria state agency or agencies, the Secretary (with the written consent appropriate agencies or officials in the state in which the pollution discharged or at the request of appropriate agencies or officials in a of the states affected thereby) may request the U. S. Attorney Gener to bring a suit on behalf of the United States to secure abatement the pollution.

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464 The Federal Water Pollution Control Act encourages and permits negotiati of such interstate compacts, although they shall not be binding on any state until "a proved by the Congress."

465 62 Stat. 1155 (1948), as amended by 70 Stat. 498 (1956); 33 U.S.C.A. sec. et. seq.

466 Interstate waters are defined for this purpose as "all rivers, lakes ,and oth waters that flow across, or form a part of, boundaries between two or more State The pollution of interstate waters in *or adjacent to* any state or states (whether polluting material is discharged directly into such waters or reaches such waters af discharge into a tributary thereof), which endangers the health or welfare of p sons in another state shall be subject to abatement as provided in the act.

The State Stream Control Commission and others in Louisiana requested the Federal government to intervene in connection with the pollution of the Corney Creek drainage system. Corney Creek arises in Arkansas and flows into Louisiana, then through Corney Lake and Corney Bayou into Bayou D'Arbonne, which flows into the Ouachita River. A five-member Hearing Board appointed by the Secretary of Health, Education, and Welfare held a hearing at Homer, La., on January 16, 1957. It found that certain operators of oil-well leases were "discharging substantial quantities of salt brines of an acid nature, oil spillage, and other substances" into the drainage system in Arkansas, "flowing through said system into Louisiana, thereby producing excessive and abnormal salinity and abnormally low pH value in said waters, causing and contributing to the pollution thereof . . ." The board found that such discharges were destroying large numbers of fish and other aquatic plants and animals and made the waters unfit for fishing, recreation, stock watering, irrigation, and municipal and most industrial uses. The board concluded that such pollution should be stopped and recommended that this be accomplished by injecting the polluting substances into underground formations.[467] The board's recommendation has been complied with by the offenders.[468]

[467] The board noted that this method of disposal was "being successfully used by a substantial majority of the other operators of . . . oil well leases in the watershed of said Corney Drainage System." See *Findings and Recommendations of the Hearing Board in the Matter of Pollution of the Interstate Waters of the Corney Drainage System, Arkansas-Louisiana.* See also *Water Problems in the Southeastern States,* supra, note 463, at pp. 26-27.

[468] Based on information supplied by Murray Stein, Chief, Interstate Enforcement Section, Water Supply and Water Pollution Control Program, Public Health Service, U.S. Dept. of Health, Education, and Welfare. For a summary of activities in the United States under the Federal Water Pollution Control Act. see Mr. Stein's paper entitled "Cleaning Up Our Water," presented at the Briefing Conference on Water Resources, sponsored by the Federal Bar Association in cooperation with the Bureau of National Affairs, Inc., held on May 22-23, 1958, in Washington, D. C.

Appendix

Some Provisions of the Louisiana Civil Code and Revised Statutes Relative to Water That Are Frequently Cited in This Bulletin

L.S.A.—Civil Code, Article 450

Things which are common, are those the ownership of which belong to nobody in particular, and which all men may freely use, conformably with the use for which nature has intended them such as air, running water, the sea and its shores.

L.S.A.—Civil Code, Article 660

It is a servitude due by the estate situated below to receive the waters which run naturally from the estate situated above, provided the industry of man has not been used to create that servitude.

The proprietor below is not at liberty to raise any dam, or to make any other work, to prevent this running of the waters.

The proprietor above can do nothing whereby the natural servitude due by the estate below may be rendered more burdensome.

L.S.A.—Civil Code, Article 661

He whose estate borders on running water, may use it as it runs for the purpose of watering his estate, or for other purposes.

He through whose estate water runs, whether it originates there or passes from lands above, may make use of it, while it runs over his lands; but he cannot stop or give it another direction, and is bound to return it to its original channel, where it leaves his estate.

L.S.A.—Revised Statutes, 9:1101

The waters of and in all bayous, rivers, streams, lagoons, lakes and bays, and the beds thereof, not under the direct ownership of any person on August 12, 1910, are declared to be the property of the state. There shall never be any charge assessed against any person for the use of the waters of the state for municipal, industrial, agricultural, or domestic purposes.

While acknowledging the absolute supremacy of the United States of America over the navigation on the navigable waters within the borders of the state, it is hereby declared that the ownership of the water itself and the beds thereof in the said navigable waters is vested in the state and that the state has the right to enter into possession of these waters when not interfering with the control of navigation exercised thereon by the United States of America. This Section shall not affect the acquisition of property by alluvion or accretion.

All transfers and conveyances or purported transfers and conveyances made by the state of Louisiana to any levee district of the state of any navigable waters and the beds and bottoms thereof are hereby rescinded, revoked and canceled.

This Section is not intended to interfere with the acquisition in good faith of any waters or the beds thereof transferred by the state or its agencies prior to August 12, 1910.